

REFERENCE

- Abbot, J., & Marohasy, J. (2014). Input selection and optimisation for monthly rainfall forecasting in Queensland, Australia, using artificial neural networks. *Atmospheric Research*, 138, 166-178.
- Abdul-Aziz, A., Anokye, M., Kwame, A., Munyakazi, L., & Nsowah-Nuamah, N. (2013). Modelling and Forecasting Rainfall Pattern in Ghana as a Seasonal Arima Process: The Case of Ashanti Region. *International Journal of Humanities and Social Science*, 3(3), 224-233.
- Adenomun, M., Ojehomon, V., & Oyejola, B. (2013). Modelling the dynamic relationship between rainfall and temperature time series data in Niger State, Nigeria. *Mathematical Theory and Modelling*, 3(4), 53-70.
- Ahmed, M., & Suphachalasai, S. (2014). Assessing the costs of climate change and adaptation in South Asia.
- Alghazali, N. O. S., & Alawadi, D. A. H. (2014). Fitting statistical distributions of monthly rainfall for some Iraqi stations. *Civil and Environmental Research*, 6(6), 40-46.
- Alhashimi, S. A. M. (2014). Prediction Of Monthly Rainfall In Kirkuk Using Artificial Neural Network And Time Series Models. *Journal of Engineering and Development*, 18(1), 129-143.
- Ali, S. M. (2013). Time series analysis of Baghdad rainfall using ARIMA method. *Iraqi Journal of Science*, 54(4), 1136-1142.
- Alimirzaie, H., Saremi, A., & Soleymani, M. M. (2015). Precipitation and Runoff Forecasting and Analysis Using Stochastic Models (Case Study: Urmia Lake Catchment area). *Bulletin of Environment Pharmacology and Life Science*, 4(6), 150-154.
- Amarasingha, R., Suriyagoda, L., Marambe, B., Galagedara, L., Silva, G., Punyawardena, R, Howden, M. (2015). Modelling the impact of changes in rainfall distribution on the irrigation water requirement and yield of short and medium duration rice varieties using APSIM during Maha season in the dry zone of Sri Lanka. *Tropical Agricultural Research*, 26(2), 274-284.
- Ampaw, E. M., Akuffo, B., Larbi, S. O., & Lartey, S. (2013). Time Series Modelling of Rainfall in New Juaben Municipality of the Eastern Region of Ghana. *International Journal of Business and Social Science*, 4(8), 116-129.
- Anděl, J. (1986). Long memory time series models. *Kybernetika*, 22(2), 105-123.

- Armash, M., & Negaresh, H. (2013). Maximum Daily Rainfall Simulation by using Artificial Neural Network (Case Study: Saravan-Iran). *Research Journal of Environmental and Earth Sciences*, 5(11), 651-659.
- Ashfaq, M., Shi, Y., Tung, W. w., Trapp, R. J., Gao, X., Pal, J. S., & Diffenbaugh, N. S. (2009). Suppression of South Asian summer monsoon precipitation in the 21st century. *Geophysical Research Letters*, 36(1).
- Baba, N. (2010). Sinking the Pearl of the Indian Ocean: Climate Change in Sri Lanka. *Global Majority E-Journal*, 1(1), 4-16.
- Babazadeh, H., & Shamsnia, S. (2014). Modeling climate variables using time series analysis in arid and semi arid regions. *African Journal of Agricultural Research*, 9(26), 2018-2027.
- Bari, S., Rahman, M., Hussain, M., & Ray, S. (2015). Forecasting monthly precipitation in Sylhet city using ARIMA model. *Civil and Environmental Research*, 7(1), 69-77.
- Basnayake, B. R. S. B., Rathnasiri, J., and Vithanage, J.C., (2004). *Rainfall and temperature scenarios for Sri Lanka under the anticipated climate change*. Paper presented at the 2nd AIACC, Regional workshop for Asia and the Pacific, Manila, Philippines.
- Bisognin, C., & Lopes, S. R. C. (2009). Properties of seasonal long memory processes. *Mathematical and Computer Modelling*, 49(9-10), 1837-1851.
- Bollerslev, T. (1986). Generalized autoregressive conditional heteroskedasticity. *Journal of econometrics*, 31(3), 307-327.
- Box, G. E., & Jenkins, G. M. (1976). Time series analysis, control, and forecasting. *San Francisco, CA: Holden Day*.
- Burn, D. H. (2003). The use of resampling for estimating confidence intervals for single site and pooled frequency analysis/Utilisation d'un rééchantillonnage pour l'estimation des intervalles de confiance lors d'analyses fréquentielles mono et multi-site. *Hydrological sciences journal*, 48(1), 25-38.
- Burt, T., & Weerasinghe, K. (2014). Rainfall distributions in Sri Lanka in time and space: An analysis based on daily rainfall data. *Climate*, 2(4), 242-263.
- Chakraborty, S., Denis, D., & Sherring, A. (2010). Development of Time Series Autoregressive Model for prediction of rainfall and runoff in Kelo Watershed Chhattisgarh. *International Journal of Advances in Engineering Science and Technology*, 2, 153-163.

- Charaniya, N., & Dudul, S. (2013). Design of Neural Network Models for Daily Rainfall Prediction. *International Journal of Computer Applications*, 61(14), 23-27.
- Chen, G., Abraham, B., & Peiris, S. (1994). Lag window estimation of the degree of differencing in fractionally integrated time series models. *Journal of time series analysis*, 15(5), 473-487.
- Chen, S., Li, Y., Shin, J., & Kim, T. (2016). Constructing confidence intervals of extreme rainfall quantiles using Bayesian, bootstrap, and profile likelihood approaches. *Science China Technological Sciences*, 59(4), 573-585.
- Cheung, Y.-W., & Diebold, F. X. (1994). On maximum likelihood estimation of the differencing parameter of fractionally-integrated noise with unknown mean. *Journal of econometrics*, 62(2), 301-316.
- Chonge, M., Nyongesa, K., Mulati, O., Makokha, L., & Tireito, F. (2015). A Time Series Model of Rainfall Pattern of Uasin Gishu County. *IOSR Journals of Mathematics*, 11(5), 77-84.
- Chung, C.F. (1996). A generalized fractionally integrated autoregressive moving-average process. *Journal of Time Series Analysis*, 17(2), 111-140.
- Dai, A. (2006). Precipitation characteristics in eighteen coupled climate models. *Journal of Climate*, 19(18), 4605-4630.
- Dastorani, M., Mirzavand, M., Dastorani, M. T., & Sadatinejad, S. J. (2014). Comparative study among different time series models applied to monthly rainfall forecasting in semi-arid climate condition. *Natural Hazards*, 81(3), 1811-1827.
- De Silva, C., Weatherhead, E., Knox, J. W., & Rodriguez-Diaz, J. (2007). Predicting the impacts of climate change—A case study of paddy irrigation water requirements in Sri Lanka. *Agricultural water management*, 93(1), 19-29.
- De Silva, C. S. (2006). *Impacts of climate change on water resources in Sri Lanka*. Paper presented at the 32nd WEDC International Conference.
- De Zoysa, M., & Inoue, M. (2014). Climate change impacts, agroforestry adaptation and policy environment in Sri Lanka. *Open Journal of Forestry*, 4(5), 439.
- Delleur, J. W., & Kavvas, M. L. (1978). Stochastic models for monthly rainfall forecasting and synthetic generation. *Journal of Applied Meteorology*, 17(10), 1528-1536.
- Department of Meteorology, Sri Lanka (2016). www.meteo.gov.lk.

- Deshpande, R. R. (2012). On the rainfall time series prediction using multilayer perceptron artificial neural network. *International Journal of emerging technology and advanced engineering*, 2(1), 2250-2459.
- Dhiman, R. C., Pahwa, S., Dhillon, G., & Dash, A. P. (2010). Climate change and threat of vector-borne diseases in India: are we prepared? *Parasitology Research*, 106(4), 763-773.
- Dickey, D. A., & Fuller, W. A. (1979). Distribution of the estimators for autoregressive time series with a unit root. *Journal of the American Statistical Association*, 74(366a), 427-431.
- Dissanayake, G., Peiris, M., & Proietti, T. (2016). State space modeling of Gegenbauer processes with long memory. *Computational Statistics & Data Analysis*, 100, 115-130.
- Dissanayake, G., Peiris, M., & Proietti, T. (2018). Fractionally differenced Gegenbauer processes with long memory: A review. *Statistical Science*, 33(3), 413-426.
- Dissanayake, G., Peiris, M., Proietti, T., Ruiz, I., & Garcia, G. (2014). *Estimation of generalized fractionally differenced processes with conditionally heteroskedastic errors*. Paper presented at the International Work Conference on Time Series. Proceedings ITISE.
- Dissanayake, G., & Peiris, S. (2012). Generalized fractional processes with conditional heteroskedasticity. *Sri Lankan Journal of Applied Statistics*, 12(1), 1-12.
- Dissanayake, G. S. (2016a). Advancement of fractionally differenced Gegenbauer processes with long memory. *Bulletin of the Australian Mathematical Society*, 94(1), 173-174.
- Domroes, M. (1974). *The Agroclimatic of Sri Lanka*. Wiesbaden.
- Dubey, A. D. (2015). Artificial neural network models for rainfall prediction in Pondicherry. *International Journal of Computer Applications*, 120(3), 30-35.
- Dunn, P. K. (2001). Bootstrap confidence intervals for predicted rainfall quantiles. *International Journal of Climatology*, 21(1), 89-94. doi: 10.1002/joc.596.
- Engle, R. F. (1982). Autoregressive conditional heteroscedasticity with estimates of the variance of United Kingdom inflation. *Econometrica: Journal of the Econometric Society*, 987-1007.
- Eni, D., & Adeyeye, F. J. (2015). Seasonal ARIMA Modeling and Forecasting of Rainfall in Warri Town, Nigeria. *Journal of Geoscience and Environment Protection*, 3(6), 91-98.

Eriyagama, N., Smakhtin, V., Chandrapala, L., & Fernando, K. (2010). *Impacts of climate change on water resources and agriculture in Sri Lanka: a review and preliminary vulnerability mapping* (Vol. 135): IWMI.

Etuk, E. H., & Mohamed, T. M. (2014). Time Series Analysis of Monthly Rainfall data for the Gadaref rainfall station, Sudan, by SARIMA Methods. *International Journal of Scientific Research in Knowledge*, 2(7), 320-330.

Farook, A. J., & Kannan, K. S. (2016). Climate change impact on rice yield in india—vector autoregression approach. *Sri Lankan Journal of Applied Statistics*, 16(3), 161-178.

Faulina, R. (2013). Suhartono," Hybrid ARIMA-ANFIS for Rainfall Prediction in Indonesia,". *International Journal of Science and Research*, 2, 159-162

Ferro, C. A., Hannachi, A., & Stephenson, D. B. (2005). Simple nonparametric techniques for exploring changing probability distributions of weather. *Journal of Climate*, 18(21), 4344-4354.

Fernando, M., Zubair, L., Peiris, T., Ranasinghe, C., & Ratnasiri, J. (2007). Economic value of climate variability impacts on coconut production in Sri Lanka: AIACC Working Paper No.45.

Fox, R., & Taqqu, M. S. (1986). Large-sample properties of parameter estimates for strongly dependent stationary Gaussian time series. *The Annals of Statistics*, 14(2), 517-532.

French, M. N., Krajewski, W. F., & Cuykendall, R. R. (1992). Rainfall forecasting in space and time using a neural network. *Journal of Hydrology*, 137(1-4), 1-31.

Gerretsadikan, A., & Sharma, M. (2011). Modeling and forecasting of rainfall data of mekele for Tigray region (Ethiopia). *Statistics and Applications*, 9(1-2), 31-53.

Geweke, J., & Porter-Hudak, S. (1983). The estimation and application of long memory time series models. *Journal of time series analysis*, 4(4), 221-238.

Ghalhari, G. A. F., Bayatani, F., Fahiminezhad, E., (2015). Comparing the Forecasting Accuracy of the Box–Jenkins Models in Modeling Seasonal Precipitation (Case Study: The South of Kerman Province, Iran). *Journal of Applied Environmental and Biological Sciences*, 5(12), 64-78.

Ghosh, S., Roy, M. K., & Biswas, S. C. (2016). Determination of the Best Fit Probability Distribution for Monthly Rainfall Data in Bangladesh. *American Journal of Mathematics and Statistics*, 6(4), 170-174.

Golabi, M., Radmanesh, F., Akhondali, A., & Kashefipoor, M. (2013). Prediction of Seasonal Precipitation using Artificial Neural Networks (Case Study: Selected

Stations of (Iran) Khozestan Province). *Journal of Basic and Applied Scientific Research*, 3(1), 589-595.

Goswami, P., & Gouda, K. (2007). Objective determination of the date of onset of monsoon rainfall over India based on duration of persistence. *CSIR Centre for Mathematical Modelling and Computer Simulation, Research Report RR CM, 711*.

Granger, C. W., & Joyeux, R. (1980). An introduction to long-memory time series models and fractional differencing. *Journal of time series analysis*, 1(1), 15-29.

Gray, H.L., Zhang, N. & Woodward, W.A. (1989). On generalized fractional Process. *Journal of Time Series Analysis*, 10(3), 233-257.

Gupta, A., Gautam, A., Jain, C., Prasad, H., & Verma, N. (2013). Time Series Analysis of Forecasting Indian Rainfall. *International Journal of Inventive Engineering and Sciences (IJIES)*, 1(6), 42-45.

Gupta, P., Mishra, S., & Pandey, S. (2014). Time series data mining in rainfall forecasting using artificial neural network. *IJSET (ISSN: 2277-1581)*, 3(8), 1060-1065.

Hall, P. (1992). The Bootstrap and Edgeworth Expansion. *SpringerVerlag, New York*.

Henry, M. (2001). Averaged periodogram spectral estimation with long-memory conditional heteroscedasticity. *Journal of time series analysis*, 22(4), 431-459.

Heo, J.-H., Salas, J., & Kim, K.-D. (2001). Estimation of confidence intervals of quantiles for the Weibull distribution. *Stochastic environmental research and risk assessment*, 15(4), 284-309.

Hidayah, E., Iriawan, N., Anwar, N., & Edijatno, E. (2011). Generating Hourly Rainfall Model using Bayesian Time Series Model (A Case Study at Sentral Station, Bondowoso). *IPTEK The Journal for Technology and Science*, 22(1), 50-56.

Hosking, J. (1981). Fractional differencing. *Biometrika* 68 165–176. *Mathematical Reviews (MathSciNet): MR614953 Zentralblatt MATH*, 464.

Hung, N. Q., Babel, M. S., Weesakul, S., & Tripathi, N. (2009). An artificial neural network model for rainfall forecasting in Bangkok, Thailand. *Hydrology and Earth System Sciences*, 13(8), 1413-1425.

IPCC. (2014). Climate Change: Impacts, Adaptation, and Vulnerability: Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change: Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Jayawardene, H., Sonnadara, D., & Jayewardene, D. (2005). Trends of rainfall in Sri Lanka over the last century. *Sri Lankan Journal of Physics*, 6, 7-17.

Jegarascsingam, V. (1998). Sri Lanka Country Report.

Jensen, M. J. (2005). Semiparametric Bayesian inference of long-memory stochastic volatility models. *Journal of time series analysis*, 25(6), 895-922.

Johnson, N.L., & Kotz, S. (1970). Continuous Univariate Distribution-1, Houghton Mifflin Company, Boston.

Kane, I. L., & Yusof, F. (2013). Assessment of Risk of Rainfall Events with a Hybrid of ARFIMA-GARCH. *Modern Applied Science*, 7(12), 78.

Kannan, M., Prabhakaran, S., Ramachandran, P.,. (2010). Rainfall forecasting using Data Mining Technique. *International Journal of Engineering and Technology*, 2(6), 397-401.

Kaushik, I., & Singh, S. M. (2008). Seasonal ARIMA model for forecasting of monthly rainfall and temperature. *Journal of Environmental Research And Development*, 3(2), 506-514.

Khodashenas, S. R., Khalili, N., & Davari, K. (2010). Monthly Precipitation Prediction by Artificial Neural Networks (Case study: Mashhad synoptic station). *NOVATECH 2010*.

Krishnankutty, N. (2006). Long-range monsoon rainfall prediction of 2005 for the districts and sub-division Kerala with artificial neural network. *Current Science*, 90(6),773-779.

Kumar, N. D., Janga, Reddy M, & Rajib, M. (2007). Regional Rainfall Forecasting using Large Scale Climate Teleconnections and Artificial Intelligence Techniques. *Journal of Intelligent Systems*, 16(4), 307-322.

Kumar, R., & Yadav, G. (2013). Forecasting of Rain Fall in Mirzapur District, Uttar Pradesh, India Using Feed-Forward Artificial Neural Network. *International Journal of Engineering Science Invention*,2(8), 87-93.

Kumarasiri, A., & Sonnadara, D. (2006). *Rainfall forecasting: an artificial neural network approach*. Paper presented at the Proceedings of the Technical Sessions.

Lin, G.-F., & Wu, M.-C. (2009). A hybrid neural network model for typhoon-rainfall forecasting. *Journal of Hydrology*, 375(3), 450-458.

Ling, S., & Li, W. (1997). On fractionally integrated autoregressive moving-average time series models with conditional heteroscedasticity. *Journal of the American Statistical Association*, 92(439), 1184-1194.

Lo, K. F. A., & Koralegedara, S. B. (2015). Effects of climate change on urban rainwater harvesting in Colombo city, Sri Lanka. *Environments*, 2(1), 105-124.

- Lucio, P. (2007). *Bootstrap for statistical evaluation of small sample inference for precipitation extreme quantiles*. Paper presented at the Geophysical Research Abstracts.
- Luk, K. C., Ball, J. E., & Sharma, A. (2001). An application of artificial neural networks for rainfall forecasting. *Mathematical and Computer Modelling*, 33(6), 683-693.
- Mahalakshmi, N., Umarani, P.R. & Selvaraj, S.R. (2014). Forecasting The Tamil Nadu Rainfall Using Hybrid ARIMA- ANN Model. *Recent Scientific Research*, 5(3), 566-569.
- Mahsin, M. (2012). Modeling rainfall in Dhaka division of Bangladesh using time series analysis. *Journal of Mathematical Modelling and Application*, 1(5), 67-73.
- Malmgren, B. A., Hulugalla, R., Hayashi, Y., & Mikami, T. (2003). Precipitation trends in Sri Lanka since the 1870s and relationships to El Niño–Southern Oscillation. *International Journal of Climatology*, 23(10), 1235-1252.
- Manawadu, L., & Fernando, N. (2008). Climate Change in Sri Lanka.
- Mar, K. W., & Naing, T. T. (2008). Optimum neural network architecture for precipitation prediction of Myanmar. *World Academy of Science, Engineering and Technology*, 48, 130-134.
- Mathugama, S. C., & Peiris, T.S.G. (2011). Critical Evaluation of Dry Spell Research. *International Journal of Basic and Applied Sciences*, 11(6), 153-160.
- Mathugama, S. C., & Peiris, T.S.G. (2012). Spatial and Temporal Analysis of Critical Dry Spells in Sri Lanka. *International Journal of Climate Change: Impacts and Responses*, 3(3), 71-88.
- Mayooran, T., & Laheetharan, A. (2014). The statistical distribution of annual maximum rainfall in Colombo district. *Sri Lankan Journal of Applied Statistics*, 15(2), 1765-1784.
- Mawilmada, N., Atapattu, S., Gunawardene, N., Weerasinghe, B., Nandana, M., Bellanawithana, A., Wimalasiri, R., & Kumari, N. (2010). National Climate Change Adaptation Strategy for Sri Lanka 2011 to 2016. *Ministry of Environment, Sri Lanka*.
- Mekanik, F., & Imteaz, M. (2012). *A multivariate artificial neural network approach for rainfall forecasting: case study of Victoria, Australia*. Paper presented at the Proceedings of the world congress on engineering and computer Science.
- Mekanik, F., Lee, T., & Imteaz, M. (2011). *Rainfall modeling using Artificial Neural Network for a mountainous region in West Iran*. Paper presented at the 19th

International Congress on Modelling and Simulation–Sustaining Our Future: Understanding and Living with Uncertainty, MODSIM2011.

Mesgari, E., Asheri, E., Hooshyar, M., Hemmesy, M.S., (2015). Rainfall Modeling and Forecasting using Neural Networks: A case study of Zab Watershed. *International Journal of Bulletin of Water Resources and Development*, 3(2).

Mishra, P., Khare, D., Mondal, A., Kundu, S., & Shukla, R. (2013). Statistical and probability analysis of rainfall for crop planning in a canal command. *Journal of Agriculture for Sustainable Development*, 1(1), 95-102.

Mohamed, T. M., & Ibrahim, A. A. (2016). Time Series Analysis of Nyala Rainfall Using ARIMA Method. *Journal of Engineering and Computer Science*, 17(1), 1-11.

Momani, P., & Naill, M. (2009). Time series analysis model for rainfall data in Jordan: Case study for using time series analysis. *American Journal of Environmental Sciences*, 5(5), 599.

Montanari, A., Rosso, R., & Taqqu, M. S. (1997). Fractionally differenced ARIMA models applied to hydrologic time series: Identification, estimation, and simulation. *Water resources research*, 33(5), 1035-1044.

Mostafaei, H., & Sakhabakhsh, L. (2011). Using SARFIMA and SARIMA models to study and predict the Iraqi Oil production. *Journal of Basic and Applied Scientific Research*, 1(10), 1715-1723.

Najim, M. (2012). Impact of climate change on culture-based fisheries of seasonal reservoirs in Sri Lanka. *A case study report*.

Nam, W. H., Hong, E. M., & Baigorria, G. A. (2016). How climate change has affected the spatio-temporal patterns of precipitation and temperature at various time scales in North Korea. *International Journal of Climatology*, 36(2), 722-734.

Nanda, S. K., Tripathy, D. P., Nayak, S. K., & Mohapatra, S. (2013). Prediction of rainfall in India using Artificial Neural Network (ANN) models. *International Journal of Intelligent Systems and Applications*, 5(12), 1-22.

Narayanan, P., Basistha, A., Sarkar, S., & Kamna, S. (2013). Trend analysis and ARIMA modelling of pre-monsoon rainfall data for western India. *Comptes rendus geoscience*, 345(1), 22-27.

Nirmala, M. (2015). Computational Models for Forecasting Annual Rainfall in Tamilnadu. *Applied Mathematical Sciences*, 9(13), 617-621.

Nirmala, M., & Sundaram, S. (2010). A Seasonal Arima Model for forecasting monthly rainfall in Tamilnadu. *National Journal on Advances in Building Sciences and Mechanics*, 1(2), 43-47.

- Nirmala, M., & Sundaram, S. (2010). Modeling and predicting the monthly rainfall in Tamilnadu as a seasonal multivariate ARIMA Process. *International Journal of Computer Engineering and Technology*, 1(1), 103-111.
- Nugroho, A., & Simanjuntak, B. H. (2014). ARMA (Autoregressive Moving Average) Model for Prediction of Rainfall in Regency of Semarang-CentralJava-Republic of Indonesia. *IJCSI International Journal of Computer Science*, 11(3), 27-32.
- OCHA. (2016). Sri Lanka; Floods and Landslides Situation. *Report No:02*. Retrieved June, 2016.
- Ogallo, L. A. (1986). Stochastic modelling of regional annual rainfall anomalies in East Africa. *Journal of Applied Statistics*, 13(1), 49-56.
- Omidvar, K. (2015). Daily Precipitation Forecasting using Artificial Neural Networks in the Province of Kerman: A case study of Station of Kerman, Baft, and Miandeh, Jiroft. *Journal of Geography and Regional Development*, 12(23), 47-50.
- Omotosho, J. B., Balogun, A., & Ogunjobi, K. (2000). Predicting monthly and seasonal rainfall, onset and cessation of the rainy season in West Africa using only surface data. *International Journal of Climatology*, 20(8), 865-880.
- Pallavi, Singh, G. (2016). Review on rainfall forecasting using different Techniques and Algorithms. *International Journal of Innovative Research in computer and Communication Engineering*, 4(3), 2901-2903.
- Partheepan, K., Jeyakumar, P., & Manobavan, M. (2005). Development of a Time-Series Model to Forecast Climatic Data in the Batticaloa District, Sri Lanka. *In proceeding of Water Professionals' Day symposium*.
- Patel, J., & Parekh, F. (2014). Forecasting Rainfall Using Adaptive Neuro-Fuzzy Inference System (ANFIS). *International Journal of Application or Innovation in Engineering & Management (IJAIEM) ISSN*, 2319-4847.
- Pathirana, S., Kawabata, M., & Goonatilake, R. (2009). Study of potential risk of dengue disease outbreak in Sri Lanka using GIS and statistical modelling. *Journal of Rural and Tropical Public Health*, 8, 8-17.
- Patrick, D. K., Edmond, P.P., Jean-Marie, T.M., Louis, E.E., Ngbolua, K.N., (2014). Prediction of rainfall using autoregressive integrated moving average model; Case of Kinshasa city (Democratic Republic of the Congo) from the period of 1970 to 2009. *Journal of Computation in Biosciences and Engineering*, 2(1), 1-6.
- Peiris, M. S., & Singh, N. (1996). Predictors for seasonal and nonseasonal fractionally integrated ARIMA models. *Biometrical journal*, 38(6), 741-752.

- Peiris, T.S.G, Peiris, T.U.S., & Rajapaksha, S. (2000). Prediction of annual national coconut production-a stochastic approach. *Sri Lanka Journal of Applied Statistics*, 1(1), 25-32.
- Peiris, T.U.S, Peiris, T.S.G., & Samita, S. (2000). Arrival dates of southwest monsoon rains-a modelling approach. *Tropical Agricultural Research*, 12, 265-275.
- Peiris, T.S.G., Wijeratne, M., Ranasinghe, C., Aanadacumaraswamy, A., Fernando, M., Jayakody, A., & Ratnasiri, J. (2004). *Impact of climate change on coconut and tea industry in Sri Lanka*. Paper presented at the 2nd AIACC regional workshop for Asia and the Pacific, Manila, the Philippines.
- Piyasiri, C., Peiris, T., & Samita, S. (2004). Change in Rainfall and Temperature of Low Country Wet Intermediate (IL1) Region of Sri Lanka. *Tropical Agricultural Research*, 16, 271-281.
- Popale, P., & Gorantiwar, S. (2014). Stochastic Generation and Forecasting of Weekly Rainfall for Rahuri Region. *International Journal of Innovative Research in science, Engineering and Technology*, 3(4),185-196.
- Porter-Hudak, S. (1990). An application of the seasonal fractionally differenced model to the monetary aggregates. *Journal of the American Statistical Association*, 85(410), 338-344.
- Portmann, R. W., Solomon, S., & Hegerl, G. C. (2009). Spatial and seasonal patterns in climate change, temperatures, and precipitation across the United States. *Proceedings of the National Academy of Sciences*, 106(18), 7324-7329.
- Premalal, K. H. M. S. (2013). Change and Behavior of Rainfall Pattern in Sri Lanka with Southern Oscillation (SO) -El Nino and La Nina *SMRC Report -No.52: SAARC Meteorological Resrach Centre(SMRC)*.
- Ramesh, K., Basu, S., & Begum, Z. (1996). Objective determination of onset, advancement and withdrawal of the summer monsoon using large-scale forecast fields of a global spectral model over India. *Meteorology and Atmospheric Physics*, 61(3-4), 137-151.
- Rasel, H. M., Imteaz, M. A., Hossain, I., & Mekanik, F. (2015). Comparative study between linear and non-linear modelling techniques in rainfall forecasting for South Australia.
- Rathnayake, V., Premaratne, H., & Sonnadara, D. (2011). Performance of neural networks in forecasting short range occurrence of rainfall. *Journal of the National Science Foundation of Sri Lanka*, 39(3), 251-260.

- Ray, B. K. (1993). Long-range forecasting of IBM product revenues using a seasonal fractionally differenced ARMA model. *International Journal of Forecasting*, 9(2), 255-269.
- Reisen, V. A. (1994). Estimation of the fractional difference parameter in the ARIMA (p, d, q) model using the smoothed periodogram. *Journal of time series analysis*, 15(3), 335-350.
- Reisen, V. A., Sarnaglia, A. J. Q., Reis Jr, N. C., Lévy-Leduc, C., & Santos, J. M. (2014). Modeling and forecasting daily average PM10 concentrations by a seasonal long-memory model with volatility. *Environmental Modelling & Software*, 51, 286-295.
- Reisen, V. A., Zamprogno, B., Palma, W., & Arteche, J. (2014a). A semiparametric approach to estimate two seasonal fractional parameters in the SARFIMA model. *Mathematics and Computers in Simulation*, 98, 1-17.
- Reiter, A., Weidinger, R., & Mauser, W. (2012). Recent climate change at the upper Danube—a temporal and spatial analysis of temperature and precipitation time series. *Climatic change*, 111(3-4), 665-696.
- Selvaraj, R. S., Sachithanatham, C.P., & Thamizharasan, K., (2013). Modeling and Predicting Total Ozone Column and Rainfall in Kodaikanal, Tamilnadu by ARIMA process. *International Journal of Engineering and Computer Science* 2(8), 2521-2526.
- Sena Jr, M., Reisen, V., & Lopes, S. (2006). Correlated errors in the parameters estimation of the ARFIMA model: A simulated study. *Communications in Statistics-Simulation and Computation*, 35(3), 789-802.
- Shamsnia, S. A., Shahidi, N., Liaghat, A., Sarraf, A., & Vahdat, S. F. (2011). *Modeling of weather parameters using stochastic methods (ARIMA model)(case study: Abadeh Region, Iran)*. Paper presented at the International Conference on Environment and Industrial Innovation. IPCBEE.
- Sharda, V., & Das, P. (2005). Modelling weekly rainfall data for crop planning in a sub-humid climate of India. *Agricultural water management*, 76(2), 120-138.
- Sharma, M. A., & Singh, J. B. (2010). Use of probability distribution in rainfall analysis. *New York Science Journal*, 3(9), 40-49.
- Shi, W., Tao, F., Liu, J., Xu, X., Kuang, W., Dong, J., & Shi, X. (2014). Has climate change driven spatio-temporal changes of cropland in northern China since the 1970s? *Climatic change*, 124(1-2), 163-177.
- Singh, B., Rajpurohit, D., Vasishth, A., & Singh, J. (2012). Probability analysis for estimation of annual one day maximum rainfall of Jhalrapatan area of Rajasthan, India. *Plant Archives*, 12(2), 1093-1100.

- Singh, K., & Xie, M. (2008). Bootstrap: a statistical method. *Unpublished manuscript, Rutgers University, USA*. Retrieved from <http://www.stat.rutgers.edu/home/mxie/RCPapers/bootstrap.pdf>.
- Solgi, A., Nourani, V., & Pourhaghi, A. (2014). Forecasting Daily Precipitation Using Hybrid Model of Wavelet-Artificial Neural Network and Comparison with Adaptive Neurofuzzy Inference System (Case Study: Verayneh Station, Nahavand). *Advances in Civil Engineering*, 2014.
- Solomon, S., Qin, D., Manning, M., Averyt, K., & Marquis, M. (2007). *Climate change 2007-the physical science basis: Working group I contribution to the fourth assessment report of the IPCC* (Vol. 4): Cambridge university press.
- Soltani, S., Modarres, R., & Eslamian, S. (2007). The use of time series modeling for the determination of rainfall climates of Iran. *International Journal of Climatology*, 27(6), 819-829.
- Sovoe, S. (2015). Modelling West African Total Precipitation Depth: A Statistical Approach. *Journal of Science and Technology*, 3.
- Sowell, F. (1992). Maximum likelihood estimation of stationary univariate fractionally integrated time series models. *Journal of Econometrics*, 53,165–188.
- Teimoorzadeh, K., Shiri, J., & Shiri, A. A. (2015). Forecasting Daily Precipitation Values, Using Wavelet Conjunction Models (Case Study: Tabriz and Marageh Stations, Iran). *Science*, 34(4), 265-269.
- Terzi, Ö., & Çevik, E. (2012). Rainfall estimation using Artificial Neural Network Method, *SDU International Journal of Technological Science*, 4(1).
- Trenberth, K. E. (2005). The impact of climate change and variability on heavy precipitation, floods, and droughts. *Encyclopedia of hydrological sciences*.
- Tularam, G. A. (2010). Relationship between EL Nino Southern Oscillation Index and Rainfall (Queensland, Australia). *International Journal of Sus.Dev.Plann*, 5(4), 378-391.
- Vamsidhar, E., Varma, K., Rao, P. S., & Satapati, R. (2010). Prediction of rainfall using backpropagation neural network model. *International Journal on Computer Science and Engineering*, 2(4), 1119-1121.
- Varathan, N., Perera, K., & Wikramanayake, N. (2010). Statistical modeling of daily extreme rainfall in Colombo. In *Proceeding of International Conference of Sustainable Built Environment*.
- Veenstra, J.Q. & McLeod, A.I. (2013). Persistence and Anti-persistence : Theory and Software (PhD Thesis).

- Waidyarathne, K. P., Peiris, T.S.G. & Samita, S., (2006). Shift in onset of first inter monsoon rain in coconut growing areas in Sri Lanka. *Journal of Tropical Agricultural Research*, 18, 1-12.
- Wang, H., Wang, C., Lin, X., & Kang, J. (2014). An improved ARIMA model for precipitation simulations. *Nonlinear Processes in Geophysics*, 21(6), 1159-1168.
- Wang, S., Feng, J., & Liu, G. (2013). Application of seasonal time series model in the precipitation forecast. *Mathematical and Computer Modelling*, 58(3), 677-683.
- Weerasinghe, H., Premaratne, H., & Sonnadara, D. (2010). Performance of neural networks in forecasting daily precipitation using multiple sources. *Journal of the National Science Foundation of Sri Lanka*, 38(3), 163-170.
- Wickramagamage, P. (2010). Seasonality and spatial pattern of rainfall of Sri Lanka: Exploratory factor analysis. *International Journal of Climatology*, 30(8), 1235-1245.
- Wijeratne, M., Anandacoomaraswamy, A., Amarathunga, M., Ratnasiri, J., Basnayake, B., & Kalra, N. (2007). Assessment of impact of climate change on productivity of tea (*Camellia sinensis* L.) plantations in Sri Lanka. *Journal of the National Science Foundation of Sri Lanka*, 35(2), 119-126.
- Yaya, O. S., & Fashae, O. A. (2014). Seasonal fractional integrated time series models for rainfall data in Nigeria. *Theoretical and applied climatology*, 120(1-2), 99-108.
- Yu, J. W., & Yu, J. (2012). Rainfall time series forecasting based on Modular RBF Neural Network model coupled with SSA and PLS. *Journal of Theoretical and Applied Computer Science*, 6(2), 3-12.
- Yusof, F., & Kane, I. L. (2012). Modeling monthly rainfall time series using ets state space and sarima models. *International Journal of Current Research*, 4(9), 195-200.
- Yusof, F., & Kane, I. L. (2013). Volatility modeling of rainfall time series. *Theoretical and applied climatology*, 113(1-2), 247-258.
- Zafor, M. A., Chakraborty, A., Muniruzzaman, S. M., & Mojumdar, S. R. (2016). Rainfall Forecasting in Northeastern part of Bangladesh Using Time Series ARIMA Model. *Research Journal of Engineering Sciences*, 5(3), 17-31.
- Zakaria, S., Al-Ansari, N., Knutsson, S., & Thafer, A.-B. (2012). ARIMA Models for weekly rainfall in the semi-arid Sinjar District at Iraq. *Journal of Earth Sciences and Geotechnical Engineering*, 2(3), 25-55.
- Zubair, L. (2002). El Nino–southern oscillation influences on rice production in Sri Lanka. *International Journal of Climatology*, 22(2), 249-260.

Zubair, L., Rao, S. A., & Yamagata, T. (2003). Modulation of Sri Lankan Maha rainfall by the Indian Ocean Dipole. *Geophysical Research Letters*, 30(2).

Zubair, L., & Ropelewski, C. F. (2006). The strengthening relationship between ENSO and northeast monsoon rainfall over Sri Lanka and southern India. *Journal of Climate*, 19(8), 1567-1575.

Zubair, L., Siriwardhana, M., Chandimala, J., & Yahiya, Z. (2008). Predictability of Sri Lankan rainfall based on ENSO. *International Journal of Climatology*, 28(1), 91-101.