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### References

1. Olivier, Jos G.J., G.J. Maenhout, M. Muntean, and Jeroen A.H.W. Peters, *Trends in global CO<sub>2</sub> emissions: 2015 Report*, European Commission and Netherlands Environmental Assessment Agency. 2015.
2. Fried, L., *Global Wind Energy Council*. 2016.
3. Zhang, M.H., *Wind Resource Assessment and Micro-Siting*, China. 2013: Wiley. 322.
4. I.S.O. 4354:2009 (E), *Wind actions on structures*. 2009: Switzerland.
5. Ayyub, B.M., and R.H. McCuen, *Probability, Statistics, and Reliability for Engineers and Scientists*. 2003: Chapman & Hall/CRC. 640.
6. International Standard IEC 61400-12, *Wind turbine generator systems—Part 12: Wind turbine power performance testing*, 1<sup>st</sup> edition International Electrotechnical Commission. 1998-2002.
7. Chang, T.P., *Estimation of wind energy potential using different probability density functions*. Applied Energy, 2011. **88**(5): p. 1848-1856.
8. Sarkar, A., G. Gugliani, and S. Deep, *Weibull model for wind speed data analysis of different locations in India*. KSCE Journal of Civil Engineering, 2017. **21**(7): p. 2764-2776.
9. Mardia, K.V., and P.E. Jupp, *Directional analysis*. 2000: .Wiley Series in Probability and Statistics.
10. Carta, J.A., C. Bueno, and P. Ramirez, *Statistical modelling of directional wind speeds using mixtures of von Mises distributions: Case study*. Energy Conversion and Management, 2008. **49**(5): p. 897-907.
11. Carta, J.A., P. Ramirez, and C. Bueno, *A joint probability density function of wind speed, and direction for wind energy analysis*. Energy Conversion and Management, 2008. **49**(6): p. 1309-1320.
12. Gugliani, G.K., A. Sarkar, S. Mandal, and V. Agrawal, *Location wise comparison of mixture distributions for assessment of wind power potential: A parametric study*. International Journal of Green Energy, 2017. **14**(9): p. 737-753.

13. Masseran, N., A.M. Razali, K. Ibrahim, and M.T. Latif, *Fitting a mixture of von Mises distributions in order to model data on wind direction in Peninsular Malaysia*. Energy Conversion and Management, 2013. **72**: p. 94-102.
14. Spurr, B.D., and M.A. Koutbeiy, *A comparison of various methods for estimating the parameters in mixtures of von Mises distributions*. Communications in Statistics-Simulation and Computation, 1991. **20**(2-3): p. 725-741.
15. Zhang, H., Y.J. Yu, and Z.Y. Liu, *Study on the maximum entropy principle applied to the annual wind speed probability distribution: A case study for observations of intertidal zone anemometer towers of Rudong in East China Sea*. Applied Energy, 2014. **114**: p. 931-938.
16. Akpinar, S., and E.K. Akpinar, *Estimation of wind energy potential using finite mixture distribution models*. Energy Conversion and Management, 2009. **50**(4): p. 877-884.
17. Akpinar, S., and E.K. Akpinar, *Wind energy analysis based on maximum entropy principle (MEP)-type distribution function*. Energy Conversion and Management, 2007. **48**(4): p. 1140-1149.
18. Li, M.S., and X.G. Li, *Investigation of wind characteristics and assessment of wind energy potential for Waterloo region, Canada*. Energy Conversion and Management, 2005. **46**(18-19): p. 3014-3033.
19. Ramirez, P., and J.A. Carta, *The use of wind probability distributions derived from the maximum entropy principle in the analysis of wind energy. A case study*. Energy Conversion and Management, 2006. **47**(15-16): p. 2564-2577.
20. Chang, T.P., *Wind speed and power density analyses based on mixture Weibull and maximum entropy distributions*. International Journal of Applied Science and Engineering, 2010. **8**(1): p. 39-46.
21. Zhao, Q., and H. Kurata, *Use of maximum entropy principle with Lagrange multipliers extends the feasibility of elementary mode analysis*. Journal of Bioscience and Bioengineering, 2010. **110**(2): p. 254-261.
22. Yari, G., and Z.A. Farsani, *Application of the maximum entropy method for determining a sensitive distribution in the renewable energy systems*. Journal of Energy Resources Technology-Transactions of the ASME, 2015. **137**(4): p. 042006,1-7.
23. Chellali, F., A. Khellaf, A. Belouchrani, and R. Khanniche, *A comparison between wind speed distributions derived from the maximum entropy principle and Weibull*

- distribution. Case of study; six regions of Algeria*. Renewable and Sustainable Energy Reviews, 2012. **16**(1): p. 379-385.
24. Li, M.S., and X.G. Li, *MEP-type distribution function: A better alternative to Weibull function for wind speed distributions*. Renewable Energy, 2005. **30**(8): p. 1221-1240.
  25. Dursun, B., and B. Alboyaci, *An evaluation of wind energy characteristics for four different locations in Balikesir*. Energy Sources Part a-Recovery Utilization and Environmental Effects, 2011. **33**(11): p. 1086-1103.
  26. Ayodele, T.R., A.A. Jimoh, J.L. Munda, and J.T. Agee, *Wind distribution and capacity factor estimation for wind turbines in the coastal region of South Africa*. Energy Conversion and Management, 2012. **64**: p. 614-625.
  27. Jangamshetti, S.H., and V.G. Rau, *Normalized power curves as a tool for identification of optimum wind turbine generator parameters*. IEEE Transactions on Energy Conversion, 2001. **16**(3): p. 283-288.
  28. Chang, T.J., Y.T. Wu, H.Y. Hsu, C.R. Chu, and C.M. Liao, *Assessment of wind characteristics and wind turbine characteristics in Taiwan*. Renewable Energy, 2003. **28**(6): p. 851-871.
  29. Chang, T.P., F.J. Liu, H.H. Ko, S.P. Cheng, L.C. Sun, and S.C. Kuo, *Comparative analysis on power curve models of wind turbine generator in estimating capacity factor*. Energy, 2014. **73**: p. 88-95.
  30. Chowdhury, S., A. Mehmani, J. Zhang, and A. Messac, *Market suitability and performance tradeoffs offered by commercial wind turbines across differing wind regimes*. Energies, 2016. **9**(5): p. 352.
  31. Zhou, Y.Y., and S.J. Smith, *Spatial and temporal patterns of global onshore wind speed distribution*. Environmental Research Letters, 2013. **8**(3) : p. 1-8.
  32. Alonzo, B., H.K. Ringkjøb, B. Jourdier, P. Drobinski, R. Plougonven, and P. Tankov, *Modelling the variability of the wind energy resource on monthly and seasonal timescales*. Renewable Energy, 2017. **113**: p. 1434-1446.
  33. Altunkaynak, A., T. Erdik, I. Dabanli, and Z. Sen, *Theoretical derivation of wind power probability distribution function and applications*. Applied Energy, 2012. **92**: p. 809-814.

34. Amaya-Martinez, P.A., A.J. Saavedra-Montes, and E.I. Arango-Zuluaga, *A statistical analysis of wind speed distribution models in the Aburra Valley, Colombia*. *Ct&F-Ciencia Tecnologia Y Futuro*, 2014. **5**(5): p. 121-136.
35. Ammari, H.D., S.S. Al-Rwashdeh, and M.I. Al-Najideen, *Evaluation of wind energy potential and electricity generation at five locations in Jordan*. *Sustainable Cities and Society*, 2015. **15**: p. 135-143.
36. Anagreh, Y., A. Bataineh, and M. Al-Odat, *Assessment of renewable energy potential, at Aqaba in Jordan*. *Renewable & Sustainable Energy Reviews*, 2010. **14**(4): p. 1347-1351.
37. Bagiorgas, H.S., G. Mihalakakou, S. Rehman, and L.M. Al-Hadhrami, *Wind power potential assessment for seven buoys data collection stations in Aegean Sea using Weibull distribution function*. *Journal of Renewable and Sustainable Energy*, 2012. **4**(1).
38. Bilgili, M., and B. Sahin, *Statistical analysis of wind energy density in the western region of Turkey*. *Energy Sources Part a-Recovery Utilization and Environmental Effects*, 2010. **32**(13): p. 1224-1235.
39. Fyrrippis, I., P.J. Axaopoulos, and G. Panayiotou, *Wind energy potential assessment in Naxos Island, Greece*. *Applied Energy*, 2010. **87**(2): p. 577-586.
40. Leite, M.D., and J.S. das Virgens, *Adjustment of models of probability distribution to hourly wind speed series for Ponta Grossa, Parana State*. *Acta Scientiarum-Technology*, 2011. **33**(4): p. 447-455.
41. Lo Brano, V., A. Orioli, G. Ciulla, and S. Culotta, *Quality of wind speed fitting distributions for the urban area of Palermo, Italy*. *Renewable Energy*, 2011. **36**(3): p. 1026-1039.
42. Okeniyi, J.O., I.F. Moses, and E.T. Okeniyi, *Wind characteristics and energy potential assessment in Akure, South West Nigeria: econometrics and policy implications*. *International Journal of Ambient Energy*, 2015. **36**(6): p. 282-300.
43. Olaofe, Z.O., *Assessment of the offshore wind speed distributions at selected stations in the South-West Coast, Nigeria*. *International Journal of Renewable Energy Research*, 2017. **7**(2): p. 565-577.
44. Ouahabi, M.H., F. Benabdelouahab, and A. Khamlichi, *Analyzing wind speed data and wind power density of Tetouan city in Morocco by adjustment to Weibull and Rayleigh distribution functions*. *Wind Engineering*, 2017. **41**(3): p. 174-184.

45. Philippopoulos, K., D. Deligiorgi, and G. Karvounis, *Wind speed distribution modeling in the Greater Area of Chania, Greece*. International Journal of Green Energy, 2012. **9**(2): p. 174-193.
46. Pishgar-Komleh, S.H., A. Keyhani, and P. Sefeedpari, *Wind speed and power density analysis based on Weibull and Rayleigh distributions (a case study: Firouzkooch county of Iran)*. Renewable and Sustainable Energy Reviews, 2015. **42**: p. 313-322.
47. Ramos, V., and G. Iglesias, *Wind power viability on a small island*. International Journal of Green Energy, 2014. **11**(7): p. 741-760.
48. Safari, B., *Modeling wind speed and wind power distributions in Rwanda*. Renewable and Sustainable Energy Reviews, 2011. **15**(2): p. 925-935.
49. Saito, S., K. Sato, and S. Sekizuka, *A discussion on prediction of wind conditions and power generation with the Weibull distribution*. JSME International Journal Series B-Fluids and Thermal Engineering, 2006. **49**(2): p. 458-464.
50. Togrul, I.T., and C. Ertekin, *A statistical investigation on the wind energy potential of Turkey's Geographical Regions*. Energy Sources Part A - Recovery Utilization and Environmental Effects, 2011. **33**(15): p. 1399-1421.
51. Wais, P., *A review of Weibull functions in wind sector*. Renewable and Sustainable Energy Reviews, 2017. **70**: p. 1099-1107.
52. Yaniktepe, B., T. Koroglu, and M.M. Savrun, *Investigation of wind characteristics and wind energy potential in Osmaniye, Turkey*. Renewable and Sustainable Energy Reviews, 2013. **21**: p. 703-711.
53. Zamani, A.R., and M.A. Badri, *Wave energy estimation by using a statistical analysis and wave buoy data near the southern Caspian Sea*. China Ocean Engineering, 2015. **29**(2): p. 275-286.
54. Stewart, D.A., and O.M. Essenwanger, *Frequency distribution of wind speed near the surface*. Journal of Applied Meteorology and Climatology, 1978. **17**: p. 1633-1642.
55. Chadee, J.C., and C. Sharma, *Wind speed distributions: a new catalogue of defined models*. Wind Engineering, 2001. **25**: p. 319-337.
56. Akpınar, E.K., and S. Akpınar, *Determination of the wind energy potential for Maden-Elazığ, Turkey*. Energy Conversion and Management, 2004. **45**(18-19): p. 2901-2914.

57. Tar, K., *Some statistical characteristics of monthly average wind speed at various heights*. Renewable and Sustainable Energy Reviews, 2008. **12**(6): p. 1712-1724.
58. Safari, B., and J. Gasore, *A statistical investigation of wind characteristics and wind energy potential based on the Weibull and Rayleigh models in Rwanda*. Renewable Energy, 2010. **35**(12): p. 2874-2880.
59. Abed, K.A., and A.A. ElMallah, *Capacity factor of wind turbines*. Energy, 1997. **22**(5): p. 487-491.
60. Akpinar, E.K., and S. Akpinar, *An assessment on seasonal analysis of wind energy characteristics and wind turbine characteristics*. Energy Conversion and Management, 2005. **46**(11-12): p. 1848-1867.
61. Akpinar, E.K., and S. Akpinar, *An assessment of wind turbine characteristics and wind energy characteristics for electricity production*. Energy Sources Part A-Recovery Utilization and Environmental Effects, 2006. **28**(10): p. 941-953.
62. Li, C., Y.Y. Liu, G. Li, J.Y. Li, D.S. Zhu, W.H. Jia, G. Li, Y.R. Zhi, and X.Y. Zhai, *Evaluation of wind energy resource and wind turbine characteristics at two locations in China*. Technology in Society, 2016. **47**: p. 121-128.
63. Jangamshetti, S.H., and V.G. Rau, *Site matching of wind turbine generators: A case study*. IEEE Transactions on Energy Conversion, 1999. **14**(4): p. 1537-1543.
64. Jangamshetti, S.H., and V.G. Rau, *Optimum siting of wind turbine generators*. IEEE Transactions on Energy Conversion, 2001. **16**(1): p. 8-13.
65. Abul'Wafa, A.R., *Matching wind turbine generators with wind regime in Egypt*. Electric Power Systems Research, 2011. **81**(4): p. 894-898.
66. Jowder, F.A.L., *Wind power analysis and site matching of wind turbine generators in Kingdom of Bahrain*. Applied Energy, 2009. **86**(4): p. 538-545.
67. Yeh, T.H. and L. Wang, *A study on generator capacity for wind turbines under various tower heights and rated wind speeds using Weibull distribution*. IEEE Transactions on Energy Conversion, 2008. **23**(2): p. 592-602.
68. Wang, L., T.H. Yeh, W.J. Lee, and Z. Chen, *Benefit evaluation of wind turbine generators in wind farms using capacity-factor analysis and economic-cost methods*. IEEE Transactions on Power Systems, 2009. **24**(2): p. 692-704.

69. Jaramillo, O.A., and M.A. Borja, *Wind speed analysis in La Ventosa, Mexico: A bimodal probability distribution case*. Renewable Energy, 2004. **29**(10): p. 1613-1630.
70. Carta, J.A., and P. Ramirez, *Analysis of two-component mixture Weibull statistics for estimation of wind speed distributions*. Renewable Energy, 2007. **32**(3): p. 518-531.
71. Akdag, S.A., H.S. Bagiorgas, and G. Mihalakakou, *Use of two-component Weibull mixtures in the analysis of wind speed in the Eastern Mediterranean*. Applied Energy, 2010. **87**(8): p. 2566-2573.
72. Qin, X., J.S. Zhang, and X.D. Yan, *Two improved mixture Weibull models for the analysis of wind speed data*. Journal of Applied Meteorology and Climatology, 2012. **51**(7): p. 1321-1332.
73. Vicente, R.T., *Influence of the fitted probability distribution type on the annual mean power generated by wind turbines: A case study at the Canary Islands*. Energy Conversion and Management, 2008. **49**(8): p. 2047-2054.
74. Johnson, R.A., *Probability and statistics for engineers*, 8<sup>th</sup> edition. 2011: PHI Publication.
75. Carta, J.A. and P. Ramirez, *Use of finite mixture distribution models in the analysis of wind energy in the Canarian Archipelago*. Energy Conversion and Management, 2007. **48**(1): p. 281-291.
76. Porcu, E., and J. Mateu, *Mixture-based modeling for space-time data*. Environmetrics, 2007. **18**(3): p. 285-302.
77. Morgan, E.C., M. Lackner, R.M. Vogel, and L.G. Baise, *Probability distributions for offshore wind speeds*. Energy Conversion and Management, 2011. **52**(1): p. 15-26.
78. Qin, X., J.S. Zhang, and X.D. Yan, *A finite mixture three-parameter Weibull model for the analysis of wind speed data*. Communications in Statistics-Theory and Methods, 2012. **41**(12): p. 2160-2171.
79. Stephen, B., S. Galloway, D. McMillan, L. Anderson, and G. Ault, *Statistical profiling of site wind resource speed and directional characteristics*. IET Renewable Power Generation, 2013. **7**(6): p. 583-592.

80. Baran, S., *Probabilistic wind speed forecasting using Bayesian model averaging with truncated normal components*. Computational Statistics and Data Analysis, 2014. **75**: p. 227-238.
81. Hu, Q.H., Y. Wang, Z.X. Xie, P.F. Zhu, and D.R. Yu, *On estimating uncertainty of wind energy with mixture of distributions*. Energy, 2016. **112**: p. 935-962.
82. Rajapaksha, K.W.G.D.H. and K. Perera, *Wind speed analysis and energy calculation based on mixture distributions in Narakkalliya, Sri Lanka*. Journal of the National Science Foundation of Sri Lanka, 2016. **44**(4): p. 409-416.
83. Bracale, A., G. Carpinelli, and P. De Falco, *A new finite mixture distribution and its expectation-maximization procedure for extreme wind speed characterization*. Renewable Energy, 2017. **113**: p. 1366-1377.
84. Gomez-Lazaro, E., M.C. Bueso, M. Kessler, S. Martin-Martinez, J. Zhang, B.M. Hodge, and A. Molina-Garcia, *Probability density function characterization for aggregated large-scale wind power based on Weibull mixtures*. Energies, 2016. **9**(2): p. 91,1-15.
85. Jaynes, E.T., *Information Theory and Statistical Mechanics I*. Physical Review, 1957. **106**(4): p. 620-630.
86. Jaynes, E.T., *Information Theory and Statistical Mechanics. II*. Physical Review, 1957. **108**(2): p. 171-190.
87. Shannon, C.E., *A Mathematical Theory of Communication*. The Bell System Technical Journal, 1948. **27**: p. 379-423,623-656.
88. Kapur, J.N., *Maximum-Entropy Models in Science and Engineering*, New Delhi, India. 2009: New age international publishers.
89. International Energy Agency, *Estimation of cost of energy from wind energy conversion system*, 2<sup>nd</sup> edition 1994: Submitted to executive committee of the IEA for R&D on WindEnergy Conversion System.
90. Zhou, J.Y., E. Erdem, G. Li, and J. Shi, *Comprehensive evaluation of wind speed distribution models: A case study for North Dakota sites*. Energy Conversion and Management, 2010. **51**(7): p. 1449-1458.
91. Yim, J.Z., *A comparative study of the statistical distributions of wave heights*. China Ocean Engineering, 1997. **11**(3): p. 285-304.

92. Oner, Y., S. Ozcira, N. Bekiroglu, and I. Senol, *A comparative analysis of wind power density prediction methods for Canakkale, Intepe region, Turkey*. Renewable and Sustainable Energy Reviews, 2013. **23**: p. 491-502.
93. Sohoni, V., S. Gupta, and R. Nema, *A comparative analysis of wind speed probability distributions for wind power assessment of four sites*. Turkish Journal of Electrical Engineering and Computer Sciences, 2016. **24**(6): p. 4724-4735.
94. Kiss, P., and I.M. Janosi, *Comprehensive empirical analysis of ERA-40 surface wind speed distribution over Europe*. Energy Conversion and Management, 2008. **49**(8): p. 2142-2151.
95. Alavi, O., A. Sedaghat, and A. Mostafaeipour, *Sensitivity analysis of different wind speed distribution models with actual and truncated wind data: A case study for Kerman, Iran*. Energy Conversion and Management, 2016. **120**: p. 51-61.
96. Celik, A.N., *A statistical analysis of wind power density based on the Weibull and Rayleigh models at the southern region of Turkey*. Renewable Energy, 2004. **29**(4): p. 593-604.
97. Gokcek, M., A. Bayulken, and S. Bekdemir, *Investigation of wind characteristics and wind energy potential in Kirklareli, Turkey*. Renewable Energy, 2007. **32**(10): p. 1739-1752.
98. Akpinar, E.K., *A statistical investigation of wind energy potential*. Energy Sources Part a-Recovery Utilization and Environmental Effects, 2006. **28**(9): p. 807-820.
99. Akpinar, E.K., and S. Akpinar, *An investigation of wind power potential required in installation of wind energy conversion systems*. Proceedings of the Institution of Mechanical Engineers Part A-Journal of Power and Energy, 2006. **220**(A1): p. 1-13.
100. Zheng, Y.Q., and R.Z. Zhao, *Characteristics for wind energy and wind turbines by considering vertical wind shear*. Journal of Central South University, 2015. **22**(6): p. 2393-2398.
101. Ucar, A., and F. Balo, *Investigation of wind characteristics and assessment of wind-generation potentiality in Uludag-Bursa, Turkey*. Applied Energy, 2009. **86**(3): p. 333-339.
102. Veigas, M., and G. Iglesias, *Evaluation of the wind resource and power performance of a turbine in Tenerife*. Journal of Renewable and Sustainable Energy, 2012. **4**(5).

103. Ucar, A., and F. Balo, *Investigation of wind energy potential in Kartalkaya-Bolu, Turkey*. International Journal of Green Energy, 2009. **6**(4): p. 401-412.
104. Sahin, A.Z., and A. Aksakal, *A statistical analysis of wind energy potential at the eastern region of Saudi Arabia*. International Journal of Energy Research, 1999. **23**(10): p. 909-917.
105. Pishgar-Komleh, S.H. and A. Akram, *Evaluation of wind energy potential for different turbine models based on the wind speed data of Zabol region, Iran*. Sustainable Energy Technologies and Assessments, 2017. **22**: p. 34-40.
106. Celik, A.N., *On the distributional parameters used in assessment of the suitability of wind speed probability density functions*. Energy Conversion and Management, 2004. **45**(11-12): p. 1735-1747.
107. Ben Amar, F., M. Elamouri, and R. Dhifaoui, *Energy assessment of the first wind farm section of Sidi Daoud, Tunisia*. Renewable Energy, 2008. **33**(10): p. 2311-2321.
108. Bilgili, M., and B. Sahin, *Investigation of wind energy density in the southern and southwestern region of Turkey*. Journal of Energy Engineering-ASCE, 2009. **135**(1): p. 12-20.
109. Akpinar, E.K., and S. Akpinar, *Statistical analysis of wind energy potential on the basis of the Weibull and Rayleigh distributions for Agin-Elazig, Turkey*. Proceedings of the Institution of Mechanical Engineers Part A-Journal of Power and Energy, 2004. **218**(A8): p. 557-565.
110. Akpinar, E.K., and S. Akpinar, *A statistical analysis of wind speed data used in installation of wind energy conversion systems*. Energy Conversion and Management, 2005. **46**(4): p. 515-532.
111. Togrul, I.T., and M.I. Kizi, *Determination of wind energy potential and wind speed data in Bishkek, Kyrgyzstan*. International Journal of Green Energy, 2008. **5**(3): p. 157-173.
112. Kose, F., M.H. Aksoy, and M. Ozgoren, *An assessment of wind energy potential to meet electricity demand and economic feasibility in Konya, Turkey*. International Journal of Green Energy, 2014. **11**(6): p. 559-576.
113. Akpinar, E.K., and S. Akpinar, *An analysis of the wind energy potential of Elazig, Turkey*. International Journal of Green Energy, 2004. **1**(2): p. 193-207.

114. Mudholkar, G.S., and G.D. Kollia, *Generalized Weibull Family - A structural-analysis*. Communications in Statistics-Theory and Methods, 1994. **23**(4): p. 1149-1171.
115. Murthy, D.N.P., M. Bulmer, and J.A. Eccleston, *Weibull model selection for reliability modelling*. Reliability Engineering and System Safety, 2004. **86**(3): p. 257-267.
116. Ramirez, P., and J.A. Carta, *Influence of the data sampling interval in the estimation of the parameters of the Weibull wind speed probability density distribution: A case study*. Energy Conversion and Management, 2005. **46**(15-16): p. 2419-2438.
117. Azad, A., M.G. Rasul, and T. Yusaf, *Statistical diagnosis of the best Weibull methods for wind power assessment for agricultural applications*. Energies, 2014. **7**(5): p. 3056-3085.
118. Chang, T.P., *Performance comparison of six numerical methods in estimating Weibull parameters for wind energy application*. Applied Energy, 2011. **88**(1): p. 272-282.
119. de Andrade, C.F., H.F.M. Neto, P.A.C. Rocha, and M.E.V. da Silva, *An efficiency comparison of numerical methods for determining Weibull parameters for wind energy applications: A new approach applied to the northeast region of Brazil*. Energy Conversion and Management, 2014. **86**: p. 801-808.
120. Hong, H.P., and S.H. Li, *Plotting positions and approximating first two moments of order statistics for Gumbel distribution: estimating quantiles of wind speed*. Wind and Structures, 2014. **19**(4): p. 371-387.
121. Ihaddadene, R., N. Ihaddadene, and M. Mostefaoui, *Estimation of monthly wind speed distribution basing on hybrid Weibull distribution*. World Journal of Engineering, 2016. **13**(6): p. 509-515.
122. Kaplan, Y.A., *Determination of the best Weibull methods for wind power assessment in the southern region of Turkey*. IET Renewable Power Generation, 2017. **11**(1): p. 175-182.
123. Mohammadi, K., O. Alavi, A. Mostafaeipour, N. Goudarzi, and M. Jalilvand, *Assessing different parameters estimation methods of Weibull distribution to compute wind power density*. Energy Conversion and Management, 2016. **108**: p. 322-335.

124. Saleh, H., A.A. Aly, and S. Abdel-Hady, *Assessment of different methods used to estimate Weibull distribution parameters for wind speed in Zafarana wind farm, Suez Gulf, Egypt*. Energy, 2012. **44**(1): p. 710-719.
125. Tizgui, I., F. El Guezar, H. Bouzahir, and B. Benaïd, *Comparison of methods in estimating Weibull parameters for wind energy applications*. International Journal of Energy Sector Management, 2017. **11**(4): p. 650-663.
126. Akdag, S.A., and O. Guler, *A novel energy pattern factor method for wind speed distribution parameter estimation*. Energy Conversion and Management, 2015. **106**: p. 1124-1133.
127. Arslan, T., Y.M. Bulut, and A.A. Yavuz, *Comparative study of numerical methods for determining Weibull parameters for wind energy potential*. Renewable and Sustainable Energy Reviews, 2014. **40**: p. 820-825.
128. Carta, J.A., P. Ramirez, and S. Velazquez, *A review of wind speed probability distributions used in wind energy analysis case studies in the Canary Islands*. Renewable and Sustainable Energy Reviews, 2009. **13**(5): p. 933-955.
129. Jiang, H.Y., J.Z. Wang, J. Wu, and W. Geng, *Comparison of numerical methods and metaheuristic optimization algorithms for estimating parameters for wind energy potential assessment in low wind regions*. Renewable and Sustainable Energy Reviews, 2017. **69**: p. 1199-1217.
130. Saha, N., Z. Gao, T. Moan, and A. Naess, *Short-term extreme response analysis of a jacket supporting an offshore wind turbine*. Wind Energy, 2014. **17**(1): p. 87-104.
131. Usta, I., *An innovative estimation method regarding Weibull parameters for wind energy applications*. Energy, 2016. **106**: p. 301-314.
132. Sedghi, M., S.K. Hannani, and M. Boroushaki, *Estimation of weibull parameters for wind energy application in Iran's cities*. Wind and Structures, 2015. **21**(2): p. 203-221.
133. Seguro, J.V., and T.W. Lambert, *Modern estimation of the parameters of the Weibull wind speed distribution for wind energy analysis*. Journal of Wind Engineering and Industrial Aerodynamics, 2000. **85**(1): p. 75-84.
134. Durisic, Z., and J. Mikulovic, *Assessment of the wind energy resource in the South Banat region, Serbia*. Renewable and Sustainable Energy Reviews, 2012. **16**(5): p. 3014-3023.

135. Erto, P., and A. Lepore, *Best unbiased graphical estimators of location-scale distribution parameters: application to the Pozzuoli's bradyseism earthquake data*. Environmental and Ecological Statistics, 2016. **23**(4): p. 605-621.
136. Genc, A., M. Erisoglu, A. Pekgor, G. Oturanc, A. Hepbasli, and K. Ulgen, *Estimation of wind power potential using Weibull distribution*. Energy Sources, 2005. **27**(9): p. 809-822.
137. Jamdade, P.G., and S.G. Jamdade, *Evaluation of wind energy potential for four sites in ireland using the Weibull distribution model*. Journal of Power Technologies, 2015. **95**(1): p. 48-53.
138. Mazzeo, D., G. Oliveti, and E. Labonia, *Estimation of wind speed probability density function using a mixture of two truncated normal distributions*. Renewable Energy, 2018. **115**: p. 1260-1280.
139. Akdag, S.A., and A. Dinler, *A new method to estimate Weibull parameters for wind energy applications*. Energy Conversion and Management, 2009. **50**(7): p. 1761-1766.
140. Bagiorgas, H.S., G. Mihalakakou, S. Rehman, and L.M. Al-Hadhrami, *Offshore wind speed and wind power characteristics for ten locations in Aegean and Ionian Seas*. Journal of Earth System Science, 2012. **121**(4): p. 975-987.
141. Chalamcharla, S.C.V., and I.D. Doraiswamy, *Mathematical modeling of wind power estimation using multiple parameter Weibull distribution*. Wind and Structures, 2016. **23**(4): p. 351-366.
142. Dorvlo, A.S.S., *Estimating wind speed distribution*. Energy Conversion and Management, 2002. **43**(17): p. 2311-2318.
143. Jang, Y.J., C.W. Choi, J.H. Lee, and K.W. Kang, *Development of fatigue life prediction method and effect of 10-minute mean wind speed distribution on fatigue life of small wind turbine composite blade*. Renewable Energy, 2015. **79**: p. 187-198.
144. Jourdier, B., and P. Drobinski, *Errors in wind resource and energy yield assessments based on the Weibull distribution*. Annales Geophysicae, 2017. **35**(3): p. 691-700.
145. Jung, C., and D. Schindler, *Global comparison of the goodness-of-fit of wind speed distributions*. Energy Conversion and Management, 2017. **133**: p. 216-234.

146. Mathaba, T., M. Mpholo, and M. Letuma, *Velocity and power density analysis of the wind at Lef seng-la-terae in Lesotho*. *Renewable Energy*, 2012. **46**: p. 210-217.
147. Ouarda, T.B.M.J., C. Charron, and F. Chebana, *Review of criteria for the selection of probability distributions for wind speed data and introduction of the moment and L-moment ratio diagram methods, with a case study*. *Energy Conversion and Management*, 2016. **124**: p. 247-265.
148. Perez, I.A., M.A. Garcia, M.L. Sanchez, and B. de Torre, *Analysis of height variations of sodar-derived wind speeds in Northern Spain*. *Journal of Wind Engineering and Industrial Aerodynamics*, 2004. **92**(10): p. 875-894.
149. Segura-Heras, I., G. Escriva-Escriva, and M. Alcazar-Ortega, *Wind farm electrical power production model for load flow analysis*. *Renewable Energy*, 2011. **36**(3): p. 1008-1013.
150. Shoaib, M., I. Siddiqui, Y.M. Amir, and S.U. Rehman, *Evaluation of wind power potential in Baburband (Pakistan) using Weibull distribution function*. *Renewable and Sustainable Energy Reviews*, 2017. **70**: p. 1343-1351.
151. Akgul, F.G., B. Senoglu, and T. Arslan, *An alternative distribution to Weibull for modeling the wind speed data: Inverse Weibull distribution*. *Energy Conversion and Management*, 2016. **114**: p. 234-240.
152. Alavi, O., K. Mohammadi, and A. Mostafaeipour, *Evaluating the suitability of wind speed probability distribution models: A case of study of east and southeast parts of Iran*. *Energy Conversion and Management*, 2016. **119**: p. 101-108.
153. Baseer, M.A., J.P. Meyer, S. Rehman, and M.M. Alam, *Wind power characteristics of seven data collection sites in Jubail, Saudi Arabia using Weibull parameters*. *Renewable Energy*, 2017. **102**: p. 35-49.
154. Ouarda, T.B.M.J., C. Charron, J.Y. Shin, P.R. Marpu, A.H. Al-Mandoos, M.H. Al-Tamimi, H. Ghedira, and T.N. Al Hosary, *Probability distributions of wind speed in the UAE*. *Energy Conversion and Management*, 2015. **93**: p. 414-434.
155. Seshaiyah, C.V., and K. Sukkiramathi, *A Mathematical model to estimate the wind power using three parameter Weibull distribution*. *Wind and Structures*, 2016. **22**(4): p. 393-408.
156. C. G. Justus, W.R.H., Amir Mikhail, and Denise Graber, *Methods for estimating wind speed frequency distributions*. *Journal of Applied Meteorology* 1978. **17**: p. 350-353.

157. Bagiorgas, H.S., G. Mihalakakou, and D. Matthopoulos, *A statistical analysis of wind speed distributions in the area of Western Greece*. International Journal of Green Energy, 2008. **5**(1-2): p. 120-137.
158. Al-Hasan, M., and R.R. Nigmatullin, *Identification of the generalized Weibull distribution in wind speed data by the Eigen-coordinates method*. Renewable Energy, 2003. **28**(1): p. 93-110.
159. Stevens, M.J.M., and P.T. Smulders, *The estimation of the parameters of the Weibull wind speed distribution for wind energy utilization purposes*. Wind Energy, 1979. **3**: p. 132-145.
160. Christofferson, R.D., and D.A. Gillete, *A simple estimator of the shape factor of the two-parameter Weibull distribution*. Journal of Applied Meteorology and Climatology, 1987. **26**: p. 323-325.
161. Cook, N.J., *"Discussion on modern estimation of the parameters of the Weibull wind speed distribution for wind speed energy analysis" by J.V. Seguro, T.W. Lambert*. Journal of Wind Engineering and Industrial Aerodynamics, 2001. **89**(10): p. 867-869.
162. Bagiorgas, H.S., M. Giouli, S. Rehman, and L.M. Al-Hadhrami, *Weibull parameters estimation using four different methods and most energy-carrying wind speed analysis*. International Journal of Green Energy, 2011. **8**(5): p. 529-554.
163. Bénédicte, J.P., and Drobinski, *Errors in wind resource and energy yield assessments based on the Weibull distribution*. Annales Geophysicae, 2017. **35**: p. 691–700.
164. Carrasco-Diaz, M., D. Rivas, M. Orozco-Contreras, and O. Sanchez-Montante, *An assessment of wind power potential along the coast of Tamaulipas, northeastern Mexico*. Renewable Energy, 2015. **78**: p. 295-305.
165. Nawri, N., G.N. Petersen, H. Bjornsson, A.N. Hahmann, K. Jonasson, C.B. Hasager, and N.E. Clausen, *The wind energy potential of Iceland*. Renewable Energy, 2014. **69**: p. 290-299.
166. Khadem, S.K., and M. Hussain, *A pre-feasibility study of wind resources in Kutubdia Island, Bangladesh*. Renewable Energy, 2006. **31**(14): p. 2329-2341.
167. Migoya, E., A. Crespo, A. Jimenez, J. Garcia, and F. Manuel, *Wind energy resource assessment in Madrid region*. Renewable Energy, 2007. **32**(9): p. 1467-1483.

168. Sharma, K., and M.R. Ahmed, *Wind energy resource assessment for the Fiji Islands: Kadavu Island and Suva Peninsula*. Renewable Energy, 2016. **89**: p. 168-180.
169. Albadi, M.H., and E.F. El-Saadany, *New method for estimating CF of pitch-regulated wind turbines*. Electric Power Systems Research, 2010. **80**(9): p. 1182-1188.
170. Albadi, M.H., and E.F. El-Saadany, *Optimum turbine-site matching*. Energy, 2010. **35**(9): p. 3593-3602.
171. Jaramillo, O.A., R. Saldana, and U. Miranda, *Wind power potential of Baja California Sur, Mexico*. Renewable Energy, 2004. **29**(13): p. 2087-2100.
172. Gumbel, E.J., *Statistics of Extremes*. 1958: London: Columbia University Press, New York.
173. Kasperski, M., *Specification and Codification of design wind loads*. 2000: Ruhr-Universität Bochum: Germany.
174. Fisher, R.A., and Tippett, L.H.C., *Limiting forms of the frequency distribution of the largest or smallest members of a sample*. Proceeding of the Cambridge Philosophical Society, 1928.
175. Lombardo, F.T., *Improved extreme wind speed estimation for wind engineering applications*. Journal of Wind Engineering and Industrial Aerodynamics, 2012. **104-106**: p. 278-284.
176. Lagomarsino, S., G. Piccardo, and G. Solari, *Statistical analysis of high return period wind speed*. Journal of Wind Engineering and Industrial Aerodynamics, 1992. **41**(1-3): p. 485-496.
177. Vega, R., *Wind directionality: a reliability based approach*. 2008: Texas Tech University: USA.
178. Cook, N.J., R.I. Harris, and R. Whiting, *Extreme wind speeds in mixed climates revisited*. Journal of Wind Engineering and Industrial Aerodynamics, 2003. **91**: p. 403-422.
179. Indian Standard 875 (Part 3) :2015, *Design Loads (other than Earthquake) for Buildings and Structures-Code of Practise*. 2015: New Delhi.
180. Cook, N.J., *Confidence limits for extreme wind speeds in mixed climates*. Journal of Wind Engineering and Industrial Aerodynamics, 2004. **92**(1): p. 41-51.

181. Peterka, J.A., and Shahid S. , *Design gust wind speeds in the United States*. Journal of Structural Engineering, 1998. **124**(2): p. 207-214.
182. Simiu, E., and N.A. Heckert, *Extreme wind distribution tails: A "peaks over threshold" approach*. Journal of Structural Engineering-ASCE, 1996. **122**(5): p. 539-547.
183. Sarkar, A., N. Kumar, and D. Mitra, *Extreme wind climate modeling of some locations in India for the specification of the design wind speed of structures*. KSCE Journal of Civil Engineering, 2014. **18**(5): p. 1496-1504.
184. Lakshmanan, N., S. Gomathinayagam, P. Harikrishna, A. Abraham, and S.C. Ganapathi, *Basic wind speed map of India with long-term hourly wind data*. Current Science, 2009. **96**(7): p. 911-922.
185. von Mises, r., *Uber die "Ganzzahligkeit" der Atomgewichte und verwandte Fragen*. Physikalische Zeitschriften XIX, 1918: p. 490–500.
186. Gumbel, E.J., J. A. Greenwood, and D. Durand, *The circular normal distribution: theory and tables*. Journal of the American Statistical Association, 1953. **48**(261): p. 131-152.
187. Satari, S.Z., Y.Z. Zubairi, A.G. Hussin, and S.F. Hassan, *Some statistical characteristic of Malaysian wind direction recorded at maximum wind speed: 1999-2008*. Sains Malaysiana, 2015. **44**(10): p. 1521-1530.
188. Kamisan, N.A.B., A.G. Hussin, and Y.Z. Zubairi, *Finding the best circular distribution for southwesterly monsoon wind direction in Malaysia*. Sains Malaysiana, 2010. **39**(3): p. 387-393.
189. Williams, B., W.F. Christensen, and C.S. Reese, *Pollution source direction identification: embedding dispersion models to solve an inverse problem*. Environmetrics, 2011. **22**(8): p. 962-974.
190. Masseran, N., and A.M. Razali, *Modeling the wind direction behaviors during the monsoon seasons in Peninsular Malaysia*. Renewable and Sustainable Energy Reviews, 2016. **56**: p. 1419-1430.
191. Indian Meteorological Department, P. 2015; Available at: <http://www.imdpune.gov.in/aws/aws.pdf>.
192. ArcGIS. *World Boundaries and Places* Available at : <https://www.arcgis.com/home/webmap/viewer.html?webmap=6cd4fabddf1b46a094db42aa6a80547c&zoom=true> 2017.

193. Tukey, J.W., *Exploratory Data Analysis*, Reading, MA. 1977: Addison-Wesley.
194. Wakil, M., *Power plant technology*, New York (NY), USA. 1984: McGraw-Hill.
195. Zhou, W., H.X. Yang, and Z.H. Fang, *Wind power potential and characteristic analysis of the Pearl River Delta region, China*. *Renewable Energy*, 2006. **31**(6): p. 739-753.
196. Celik, A.N., *A techno-economic analysis of wind energy in southern turkey*. *International Journal of Green Energy*, 2007. **4**(3): p. 233-247.
197. Al-Abbadi, N.M., and S. Rehman, *Wind speed and wind power characteristics for Gassim, Saudi Arabia*. *International Journal of Green Energy*, 2009. **6**(2): p. 201-217.
198. Ucar, A., and F. Balo, *Evaluation of wind energy potential and electricity generation at six locations in Turkey*. *Applied Energy*, 2009. **86**(10): p. 1864-1872.
199. Akdag, S.A., and O. Guler, *Wind characteristics analyses and determination of appropriate wind turbine for AmasraBlack Sea Region, Turkey*. *International Journal of Green Energy*, 2010. **7**(4): p. 422-433.
200. Ohunakin, O.S., *Wind resources in North-East geopolitical zone, Nigeria: An assessment of the monthly and seasonal characteristics*. *Renewable and Sustainable Energy Reviews*, 2011. **15**(4): p. 1977-1987.
201. Ohunakin, O.S., *Assessment of wind energy resources for electricity generation using WECS in North-Central region, Nigeria*. *Renewable and Sustainable Energy Reviews*, 2011. **15**(4): p. 1968-1976.
202. Sedaghat, A., A. Hassanzadeh, J. Jamali, A. Mostafaeipour, and W.H. Chen, *Determination of rated wind speed for maximum annual energy production of variable speed wind turbines*. *Applied Energy*, 2017. **205**: p. 781-789.
203. Cooney, C., R. Byrne, W. Lyons, and F. O'Rourke, *Performance characterisation of a commercial-scale wind turbine operating in an urban environment, using real data*. *Energy for Sustainable Development*, 2017. **36**: p. 44-54.
204. Lanzafame, R., and M. Messina, *Horizontal axis wind turbine working at maximum power coefficient continuously*. *Renewable Energy*, 2010. **35**(1): p. 301-306.
205. Janagmshetti, S.H., and G.V. Rau, *Normalized power curves as a tool for identification of optimum wind turbine generator parameters*. *IEEE Transactions on Energy Conversion*, 2001. **16**(3): p. 283-288.

206. Kwon, S.D., *Uncertainty analysis of wind energy potential assessment*. Applied Energy, 2010. **87**(3): p. 856-865.
207. Kaspersky, M., *Estimation of design wind speed*. 7<sup>th</sup> International Advance School on Wind Engineering, 2010: New Delhi, India. p. 449-478.
208. Rodriguez-Hernandez, O., J.A. del Río, and O.A. Jaramillo, *The importance of mean time in power resource assessment for small wind turbine applications*. Energy for Sustainable Development, 2016. **30**: p. 32-38.
209. Bilir, L., M. Imir, Y. Devrim, and A. Albostan, *An investigation on wind energy potential and small scale wind turbine performance at Incek region - Ankara, Turkey*. Energy Conversion and Management, 2015. **103**: p. 910-923.
210. Shu, Z.R., Q.S. Li, and P.W. Chan, *Investigation of offshore wind energy potential in Hong Kong based on Weibull distribution function*. Applied Energy, 2015. **156**: p. 362-373.
211. Allnoch, N., *Windkraftnutzung im nordwestdeutschen Binnenland: Ein System zur Standortbewertung für Windkraftanlagen*. . Geographische Kommission for Westfalen Münster, Ardey-Verlag, 1992: p. 160.
212. Rehman, S., A.M.M. Alam, J.P. Meyer, and L.M. Al-Hadhrami, *Wind speed characteristics and resource assessment using Weibull parameters*. International Journal of Green Energy, 2012. **9**(8): p. 800-814.
213. Titterington, D.M., A.F.M. Smith, and U.E. Makov, *Statistical Analysis of Finite Mixture Distributions*, New York. 1985: Wiley Publication.
214. Venkataraman, P., *Applied Optimization with Matlab Programming*, New York. 2002: Wiley.
215. Castillo, E., Hadi, A.S., Balakrishnan, N., and Sarabia, J.M. , *Extreme value and related models with applications in engineering and science*, New Jersey. 2005: Wiley-Interscience, John Wiley & Sons, Inc.
216. Li, J., Li, Chunxiang, He, Liang, and Shen, Jianhong *Extending modulating functions for simulation of wind velocities with weak and strong nonstationarity*. Renewable Energy, 2015. **83**: p. 384-397.
217. Soukissian, T.H., and C. Tsalis, *The effect of the generalized extreme value distribution parameter estimation methods in extreme wind speed prediction*. Natural Hazards, 2015. **78**(3): p. 1777-1809.

218. Kasperski, M., *Specification of the design wind load—A critical review of code concepts*. Journal of Wind Engineering and Industrial Aerodynamics, 2009. **97**(7): p. 335-357.
219. Harris, R.I., *Gumbel revisited: a new look at extreme value statistics applied to wind speeds* Journal of Wind Engineering and Industrial Aerodynamics, 1996. **59**(1): p. 1-22.
220. Galambos, J., and N. Macri, *Classical extreme value model and prediction of extreme winds*. Journal of Structural Engineering-ASCE, 1999. **125**(7): p. 792-794.
221. Cook, N.J., *Towards better estimation of extreme winds*. Journal of Wind Engineering and Industrial Aerodynamics, 1982. **9**(3): p. 295-323.
222. Ferreira, A., and H.L. de., *On the block maxima method in extreme value theory: PWM estimators*. Annals of Statistics, 2015. **43**(1): p. 276-298.
223. Coles, S., *An introduction to statistical modeling of extreme values*. 2001, Berlin: Springer.
224. Cook, N.J., *The designer's guide to wind loading of building structures. Part 1: background, damage survey, wind data and structural classification*. 1985, London: Butterworths.
225. Gringorten, I., *A plotting rule for extreme probability paper*. Journal of Geophysical Research, 1963. **68**(3): p. 813-814.
226. Guo, S.L., *A discussion on unbiased plotting positions for the general extreme value distribution*. Journal of Hydrology, 1990. **121**(1-4): p. 33-44.
227. Cunnane, C., *Unbiased plotting positions- a review*. Journal of Hydrology, 1978. **37**(3/4): p. 205-222.
228. Hazen, A., *Storage to be provided in impounding reservoirs for municipal water supply*. Transactions of the American Society of Civil Engineers, 1914. **1308**(77): p. 1547-1550.
229. Kim, S., H. Shin, K. Joo, and J.-H. Heo, *Development of plotting position for the general extreme value distribution*. Journal of Hydrology, 2012. **475**: p. 259-269.
230. Goel, N.K., and M. De, *Development of unbiased plotting position formula for general extreme value distribution*. Stochastic Environmental Research and Risk Assessment, 1993. **7**(1): p. 1-13.

231. In-na, N., and V.-T.-V. Nguyen, *An unbiased plotting position formula for the generalized extreme value distribution*. Journal of Hydrology, 1989. **106**: p. 193-209.
232. Harris, I., *Generalised pareto methods for wind extremes. Useful tool or mathematical mirage?* Journal of Wind Engineering and Industrial Aerodynamics, 2005. **93**(5): p. 341-360.
233. Davis, M.W., *A new thermal rating approach: the real time thermal rating system for strategic overhead conductor transmission lines—part i: general description and justification of the real time thermal rating system* IEEE Transactions on Power Apparatus and Systems 1977. **96**: p. 803-809.
234. Douglass, D.A., *Weather-dependent versus static thermal line ratings*. IEEE Transactions on Power Delivery 1988. **3**: p. 742–53.
235. Razali, A.M., A. Ahmad, A. Zaharim, and K. Sopian, *Statistical analysis of wind directional data*. The 3<sup>rd</sup> International Conference on Mathematics and Statistics. 2008: Indonesia.
236. Ley, C., and T. Verdebout, *Modern Directional Statistics*, Florida. 2017: Chapman and Hall / CRC Press, Boca Raton.
237. Kato, S., and M.C. Jones, *A tractable and interpretable four-parameter family of unimodal distributions on the circle*. Biometrika, 2015. **102**: p. 181-190.
238. Hussin, A.G., J.F. Jalaludin, and I. Mohamed, *Analysis of Malaysian wind direction data using AXIS*. . Journal of Applied Sciences Research, 2006. **2**: p. 1019–1021.
239. Qin, X., S.J. Zhang, and D.X. Yan, *A new circular distribution and its application to wind data*. . Journal of Mathematics Research, 2010. **2**: p. 12–17.
240. NIST/SEMATECH e-Handbook of Statistical Methods, <http://www.itl.nist.gov/div898/handbook/>, April 2012.