Abstract

Severe thunderstorm is a seasonal and mesoscale atmospheric event. The sudden increase in wind speed and the other weather features during this event have various destructive effects on the people. Correct forecasting with enough lead time is very important to minimize the damages occurring in day-to-day life. In this paper, artificial neural network technique has been applied to predict the severe thunderstorm. Multilayer Perceptron (MLP) has been applied on the weather parameters of moisture difference, adiabatic lapse rate and vertical wind shear which were recorded by the radiosonde-rawind (RSRW) in the early morning at 06.00 am local time. MLP classified and predicted ‘severe storm’ and ‘no storm’ days in this work correctly nearly up to 70% having around 12 hours lead time.

References

- Ramaswami, C., 1956. "On the sub-tropical jet stream and its role in the development of large-scale convection", Tellus, 8, 26-60.

Index Terms

Computer Science
Artificial Intelligence

Keywords
Artificial Neural Network  Multilayer Perceptron  RSRW  Severe Thunderstorm and Wind-shear.