



## **Detection Complex networks of Earthquakes Using Self-Organizing Neural Networks (SOFM)**

Mostafa AllamehZadeh  
IIES, Tehran, Iran (zadeh66@hotmail.com)

This paper focuses on the shape of clusters of earthquakes that can be quantified in their network by artificial neural net based on distance between two events (the pairs of linked neighbors). The knowledge can be extracted from the number of events by using SOFM and links in the networks of earthquakes.

We find that there is strong correlation in earthquakes ( $M_s > 4.5$ ) that are very important to the stress transfers. It is demonstrated that the synthetic clustering in space and time of earthquakes is useful for seismic hazard assessment and intermediate-range earthquake forecasting.