

## **Correlation between seismic events and active faults in Venezuela**

Carolina Granada\*

Venezuelan Foundation for Seismological Research, Caracas, Venezuela

[cgranado@funvisis.gob.ve](mailto:cgranado@funvisis.gob.ve)

Raquel Vasquez

Venezuelan Foundation for Seismological Research, Caracas, Venezuela

[rvasquez@funvisis.gob.ve](mailto:rvasquez@funvisis.gob.ve)

We used Bayesian Techniques to establish quantitatively the connection between the hypocenters location of earthquakes occurring in active fault system segments in Venezuela. We analysed probability density functions and prior probabilities based on the application of the the Bayes theorem to establish a correlation between a seismic event and a specific fault combined with the frequency-magnitude analysis of the seismicity. The idea of the process is to contribute with valuable information in the estimation of seismic hazard in seismic regions with crustal seismicity.

Key Words: Bayes' theorem, seismicity