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Indranil SenGupta* (indranil.sengupta@ndsu.edu), Department of Mathematics, North Dakota State University, Fargo, ND 58108. *Jump in financial market and estimation of earthquake- a similar analysis.*

In this work we study scale invariant functions and stochastic Lévy models and we apply them to Geophysical data. We show that a pattern arises from the scale invariance property and Lévy flight models that may be used to estimate parameters related to some major event - major earthquake. We relate this to some results in finance. Surprisingly both Lévy flight and scale invariance methods give reasonable estimate for the *crash*. *Crash* in geophysical data will be interpreted as an estimation of earthquake. For financial market it will be interpreted as some major jump. (Received August 20, 2012)