CNR IMATI
Istituto di Matematica Applicata e Tecnologie Informatiche

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ANNUNCIO DI SEMINARIO

Comunico che **giovedì 4 Marzo 2004 alle ore 14.00**, presso la sede del C.N.R. (via Bassini 15, Milano), il Dottor

Dragomir GOSPODINOV
Geophysical Institute, Plovdiv, Bulgaria

terrà una conferenza sul tema

Stochastic analysis of triggered seismicity in Kresna region (SW Bulgaria, 1904) and Umbria-Marche region (Central Italy, 1997)

Con l'invito ad intervenire, La prego di dare la più ampia diffusione al presente annuncio.

Il Responsabile della Sezione di Milano
Dott. Bruno Betrò

Abstract: A Restricted Epidemic Type Aftershock Sequence (RETAS) model has been elaborated, in which only earthquakes with magnitude bigger than some threshold M_{th} can trigger aftershocks. We applied RETAS model to study two aftershock sequences - one after a very strong earthquake of $M = 7.8$ in Kresna, 1904, SW Bulgaria and an aftershock sequence with several moderate strength events in the Umbria-Marche region, 1997 in Central Italy. The best fitted model for the sequence in Kresna turned out to be the modified Omori formula (MOF), which reveals that triggered seismicity can be considered to be due to stress field changes, caused by only the first very strong mainshock. The seismic sequence in Umbria-Marche is much more complex. The best fitted model is ETAS when all events with $M = 2.9$ are examined, and changes to RETAS with a triggering level $M_{th} = 5.0$ if the cut-off magnitude is set to $M_0 = 3.6$. Events with magnitude bigger than 3.6 seem to correlate more in space and time to the areas of highly increased stress after each strong event in the sequence.

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