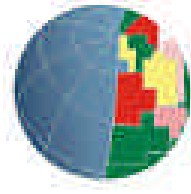




Università degli Studi di Messina  
*Facoltà di Scienze MFN*  
*Dipartimento di Scienze della Terra*



Istituto Nazionale di Geofisica e Vulcanologia  
*Sezione di Roma 1 'Sismologia e Tettonofisica'*  
*Sezione di Catania*

**WORKSHOP on**  
***Seismogenic faulting and seismic activity***  
***in the Calabro-Peloritan Arc region***

**Palacongressi Sala Auditorium, Taormina, Sicily**  
**16 and 17 October 2003**

***Scientific program***

***organizing committee***

**Giancarlo Neri (Dipartimento di Scienze della Terra, Università di Messina)**  
**Gianluca Valensise (INGV, Sezione di Roma 1 “Sismologia e Tettonofisica”)**  
**Domenico Patanè and Graziella Barberi (INGV, Sezione di Catania)**

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**16 October 2003, morning**

09:00-09:30 Opening of the Workshop and welcome to participants

*Chairperson: E. Boschi*

***Introductory papers***

09:30 Giardini D., Goes S., Pino N.A., Jenny S., Hollestein C., Kahle H-G., Geiger A. (solicited)  
*The recent geodynamic evolution of the South-Central Mediterranean and the source process of the 1908 Messina Strait earthquake.*

09:50 Amoruso A., Crescentini L., Scarpa R. (solicited)  
*Source characterization of the 1908 Messina earthquake from joint inversion of geodetic and seismic data.*

10:10 Valensise G., Basili R., Burrato P. (solicited)  
*Geomorphic evidence for the characteristics and complexity of the 1908 seismogenic source.*

10:30-10:50 Discussion

***Session I - Seismicity and seismotectonics***

10:50 Azzaro R., Barbano M.S. (solicited)  
*Features of long-term seismicity: the role of seismic sequences and minor earthquakes in defining seismogenic sources in the Peloritan region.*

11:10 Pondrelli S., Morelli A., Ekstrom G. (solicited)  
*Regional CMT computation and its impact in the seismotectonic study of the Sicily-Calabrian Arc region.*

11:30-11:50 Break

*Chairperson: R. Madariaga*

11:50 Beranzoli L., Billi A., Calore D., D'Anna G., Faccenna C., Favali P., Gasparoni F., Gerber H., Hoog S., Iafolla V., Neri G. (solicited)

*Scientific results of the first mission of the seafloor observatory SN-1 (offshore Eastern Sicily) and future perspectives.*

12:10 Guerra I., Gervasi A., Harabaglia P., Neri G., Orecchio B. (solicited)

*Recent instrumental seismicity in the Calabrian Arc region and its relationship to tectonic lineaments.*

12:30 Barberi G., Gervasi A., Guerra I., Harabaglia P., Neri G., Orecchio B. (solicited)

*Seismic deformation zones during 1978-2001 in the Calabrian Arc inferred from estimates of earthquake parameters in a 3D velocity structure.*

12:50-13:10 Discussion

13:10-15:00 Break

### **16 October 2003, afternoon**

15:00 Invited talk

Raul Madariaga, École Normale Supérieure, Paris

*Recent results in earthquake source dynamics and future work.*

15:40 Michelini A., Lomax A.J. (solicited)

*High resolution earthquake location.*

### ***Session II - Active tectonics and crustal deformation***

*Chairpersons: I. Guerra and A. Kiratzi*

16:05 Anzidei M., Serpelloni E., Baldi P., Casula G., Galvani N.A. (solicited)

*Present day kinematics of Italy and surrounding regions from permanent and non-permanent GPS networks.*

16:25 D'Agostino N., Selvaggi G. (solicited)

*Present-day kinematics of the Calabrian subduction zone from continuous GPS measurements.*

16:45 Puglisi G., Aloisi M., Palano M. (solicited)

*Ground deformation studies in the Peloritani-Nebrodi area from GPS measurements.*

17:05-17:25 Discussion

17:25-17:45 Break

17:45 Tortorici L., Monaco C., Catalano S., De Guidi G. (solicited)

*Active faulting in the Calabrian Arc and Eastern Sicily.*

18:05 Argnani A., Bonazzi C. (solicited)

*Neotectonics of the Eastern Sicily offshore: recent reactivation of an old structure.*

18:25 Antonioli F., Ferranti L., Kershaw S., Lambeck K., Monaco C., Verrubbi V., Dai Prà G.

*Evidence for non-uniform uplift rates in southern Italy during late Holocene.*

18:45-19:10 Discussion

### **17 October 2003, morning**

#### ***Session III - Crustal structure and seismogenic structures***

*Chairpersons: A. Bottari and R. Scarpa*

08:30 Barberi G., Cosentino M. T., Gervasi A., Guerra I., Neri G., Orecchio B. (solicited)

*Crustal seismic tomography in the Calabrian Arc region, South Italy.*

08:45 Tuvè T., Ibanez J.M., Bottari A. (solicited).

*Crustal attenuation structure in the Straits of Messina by applying different analysis methods.*

09:00 Solarino S., Eva C., Ferretti G. (solicited)

*Tomographic methods and applications to Alps and Apennines.*

09:20 Diaferia I., Loddo M., Schiavone D., Siniscalchi A. (solicited).

*Contribution of high resolution electromagnetic profiling to the characterization of the Pollino fault area.*

09:40 Lavecchia G., Boncio P., Pace B. (solicited)

*Three-dimensional imaging of individual seismogenic sources using structural and seismological constraints: an application to Central Italy.*

10:00-10:15 Discussion

10:15 Invited talk

Anastasia Kiratzi, Aristotle University of Thessaloniki

*Source parameters that affect strong ground motions.*

10:55-11:10 Break

11:10 Invited talk

Max Wyss, Geophysical Institute, University of Alaska at Fairbanks; Director of World Agency of Planet. Monitor. and Earthquake Risk Reduction, Geneva

*Comparison between seismicity on creeping and locked patches of the San Andreas Fault.*

Poster Session (11:50-13:30)

13:30-15:00 Break

## 17 October 2003, afternoon

### **Session IV - The geodynamic engine**

Chairpersons: *C. Eva and M. Wyss*

15:00 Lentini F., Carbone S., Di Stefano A., Guarnieri P. (solicited)

*Geological and structural tools for defining the geodynamic evolution of the Calabro-Peloritan Arc.*

15:20 Guarnieri P., Carbone S., Del Ben A., Di Stefano A., Lentini F. (solicited)

*Quaternary evolution of the Messina Strait in the context of a forearc-type basin: implications for the active tectonics.*

15:35 Giunta G., Luzio D., Cello G., Renda P., Nigro F., Tondi E., D'Anna G., De Luca L., Giorgianni A., Vitale M. (solicited)

*Active geodynamic processes in Northern Sicily - Southern Tyrrhenian border: constraints from seismotectonic analysis.*

15:55 Neri G., Barberi G., Oliva G., Orecchio B. (solicited)

*Puzzling features of seismogenic stress distribution in Sicily.*

16:15 Amato A., Chiarabba C. (solicited).

*Seismicity and deep structure of the calabrian arc subduction zone.*

16:35-16:50 Break

16:50 Faccenna C., Funicello F., Piromallo C., Rossetti F., Giardini D. (solicited)

*Subduction and back-arc extension in the southern Tyrrhenian Sea.*

17:10 Mantovani E., Viti M., Babbucci D., Albarello D. (solicited).

*Recent geodynamic evolution and present tectonic setting of the Calabrian Arc: quantitative insights from numerical modelling.*

17:45-18:30 Concluding discussion

18:30 End of the Workshop

### **Poster Session**

**1** S1-1

Bottari C., Walsh J. St. P., Stiros S. C.

*New archaeological evidence of earthquakes in the Calabro-Peloritan Arc region.*

**2** S1-2

Galli P., Bosi V.

*The contribution of Paleoseismology to active faults investigation in Calabria.*

**3 S1-3**

Galli P., Bosi V., Galadini F.

*New Archaeoseismological and Paleoseismological data from Southern Apennines.*

**4 S1-4**

Pettenati F., Sirovich L.

*A summary of the automatic source inversions of the regional intensity patterns of the earthquakes of Jan. 9 and 11, 1693 in SE Sicily from various catalogs: one only segmented source, in-land.*

**5 S1-5**

Milano G., Di Giovambattista R., Ventura G.

*Local stress from seismic sequences in the Southern Apennines.*

**6 S1-6**

Arrigo G., Roumelioti Z., Benetotos Ch., Kiratzi A., Bottari A., Neri G., Termini D., Gorini A., Marcucci S.

*Source modelling of South Italy earthquakes using teleseismic and strong motion data.*

**7 S1-7**

Pino N. A., Giardini D., Boschi E.

*Constraints on the source of the 1908 Messina earthquake from "historical" instrumental seismograms.*

**8 S3-1**

Beranzoli L., Favali P., and the SN-1 Team.

*SN-1: a seafloor observatory in the Mediterranean.*

**9 S3-2**

Sgroi T., Barberi G., Beranzoli L., Favali P., Neri G.

*Improvement of hypocenter locations by integration of land-based and OBS data.*

**10 S3-3**

Scarfi L., Langer H., Scaltrito A.

*High precision relocation of a microearthquake cluster in the Peloritan Mountain Chain.*

**11 S3-4**

Barberi G., Neri G., Patanè D., Scarfi L.

*Earthquake hypocenter location by different methods in Northeastern Sicily.*

**12 S3-5**

Presti D., Troise C., De Natale G.

*Bayesian joint location of seismic sequences to define seismogenic structure: an application to the 1997 Umbria-Marche sequence.*

**13 S3-6**

D'Agostino M., La Via M., Mangiagli S., Reitano D., Torrisi O.

*Monitoring System and automatic data update.*

**14 S4-1**

De Astis G., Gaudiosi G., Lo Bascio D., Milano G., Musacchio G., Ventura G., Vilaro G.  
*Geodynamic significance of the Aeolian volcanism (Southern Tyrrhenian Sea, Italy) in light of structural, seismological and geochemical data.*

**15 S4-2**

Mele G.  
*Propagation of seismic waves through the south Tyrrhenian slab.*