



17-20
September 2023
Lixouri, Kefalonia Island

8th International Colloquium on Historical Earthquakes, Palaeo- Macroseismology and Seismotectonics

Past earthquakes
and advances in
seismology for
informed risk
decision-
making.



70 years have passed
from the devastating
1953 earthquakes

PROGRAM

SUNDAY 17 SEPTEMBER

2023

15:00-18:00 Registrations
18:30 Icebreaker - Haritatos Winery

MONDAY 18 SEPTEMBER

2023

08:00-08:30 Registrations
09:00-09:30 Opening Ceremony

SESSION 1 | PALAEOSEISMOLOGY, ARCHAEOSEISMOLOGY

Chairpersons: Paola Albini – Levent Gulen

09:30-10:00 **Invited Lecture: Stathis Stiros**
Coastal changes, the 1953 earthquakes, and palaeoseismic events of Cephalonia

10:00-10:15 Nr. 7: "Archaeoseismological Study of two Rural Roman Buildings in Germania Superior"
Sarah Roth and Klaus-Günter Hinzen

10:15-10:30 Nr. 32: "Towards a Database for Archaeoseismology"
Miklos Kazmer and Krzysztof Gaidzik

10:30-10:45 Nr. 39: "3D finite element analysis of seismic response of a slender stalagmite"
Marcin Jaworski, Katalin Gribovszki, Zbigniew Zembaty, Piotr Bonkowski and Piotr Bobra

10:45-11:00 Nr. 60: "Collapsed columns in the Agora of Apamea and Baalbek"
Mohamed Reda Sbeinati and Mustapha Meghraoui

11:00-11:30 Coffee Break & Poster Session

HISTORICAL EARTHQUAKES, MACROSEISMOLOGY | SESSION 2

Chairpersons: Maria-Jose Jimenez – Stathis Stiros

- 11:30-12:00 **Invited Lecture: Roger Musson**
Towards the International Macroseismic Scale (IMS-24)
- 12:00-12:15 Nr. 61: "Using low-cost seismic recording infrastructure for potential evaluation of simulation models on seismic surface waves spatial distribution"
Nikos Aravatinos-Zafiris, Ioannis Vlachos, Dionysios Katerelos, Mihail Sigalas and Markos Avlonitis
- 12:15-12:30 Nr. 15: "An Updated 19th Century Earthquake Catalog for the Rhine-Meuse-Schelde (DE, NL, BE) Region from Historical Macroseismic Data"
Koen Van Noten, Thierry Camelbeek, Klaus-Günter Hinzen, Bernard Dost and Thomas Lecocq
- 12:30-12:45 Nr. 21: "A probabilistic approach for integrating macroseismic intensity data"
Andrea Antonucci, Andrea Rovida, Vera D'Amico and Dario Albarello
- 12:45-13:00 Nr. 23: "Merging macroseismic data from field surveys and online questionnaires in Italy"
Mario Locati, Andrea Antonucci, Valerio De Rubeis, Laura Graziani, Andrea Rovida, Paola Sbarra, Diego Sorrentino, Andrea Tertulliani and Patrizia Tosi
- 13:00-13:15 Nr. 35: "Forgotten Earthquakes and Where to Look for Them (and Also Why...)"
Sofia Baranello, Romano Camassi and Viviana Castelli
- 13:15-13:30 Nr. 52: "A repository of documentary material dedicated to the earthquakes of Kefalonia"
Vasiliki Kouskouna, Gerasimos Sotiriou Galanos, Paola Albin, Maria-Jose Jimenez and Mariano Garcia-Fernandez
- 13:30-14:30 Lunch Break

HISTORICAL EARTHQUAKES, MACROSEISMOLOGY | SESSION 3

Chairpersons: George Kaviris – Koen van Noten

- 14:30-15:00 **Invited Lecture: Max Stucchi**
Large Historical Earthquakes (1000-1900) Around the East Anatolian Fault Zone

- 15:00-15:15 Nr. 36: "Macroseismic intensity: A disaster risk management perspective"
Georgios Sakkas, Vassiliki Kouskouna, Nikolaos Sakellariou, Ioannis Spingos, Vasileios Kapetanidis and Nikolaos Galanos
- 15:15-15:30 Nr. 40: "Quantifying Uncertainties in Magnitude – Depth Estimates of Earthquakes from Macroseismic Intensities - Application in Volos & Aigio, Greece"
Eleni Manousou and Vasiliki Kouskouna
- 15:30-15:45 Nr. 49: "Revision of moderate Seismicity in Italy during the 1930s. Preliminary results of the 1930"
Carlos Hector Caracciolo
- 15:45-16:00 Nr. 50: "Information About the Macroseismic Field in Cyprus From Antiquity to XX century"
† **Basil Papazachos, Christos Papaioannou, Emmanouil Scordilis and Kiriakos Solomi**
- 16:00-16:30 Coffee Break & Poster Session

SESSION 4 | HISTORICAL EARTHQUAKES, MACROSEISMOLOGY

Chairpersons: **Mariano Garcia Fernandez – Ritsa Papadimitriou**

- 16:30-17:00 **Invited Lecture: Remy Bossu**
Crowdsourced data and their utility for rapid earthquake impact assessment: The example of the 2023 M7.8 Kahramanmaraş, Türkiye, earthquake
- 17:00-17:15 Nr. 11: "Investigating the homogeneity of Italian macroseismic data"
Andrea Rovida, Andrea Antonucci, Laura Graziani, Mario Locati, Carlo Meletti and Andrea Tertulliani
- 17:15-17:30 Nr. 17: "A review and present status of macroseismic studies in Catalonia"
Josep Batlo, Janira Irizarry, Jose Antonio Jara, Núria Romeu and Maria Teresa Merino
- 17:30-17:45 Nr. 18: "Re-assessment of the Macroseismic source parameters for the 1932 Uden earthquake in the Netherlands"
Bernard Dost, Ben Neefs and Koen van Noten
- 17:45-18:00 Nr. 22: "CallPE: an open-source tool for Intensity Prediction Equation Calibration"
Ludmila Provost
- 20:30 Official Dinner

08:30-09:00 Registrations

SEISMOTECTONICS | SESSION 5

Chairpersons: Vasileios Karakostas – Max Stucchi

- 09:00-09:30 **Invited Lecture: Efthimis Lekkas**
The August 1953 devastating earthquakes in the Ionian Sea: reviewing existing information and using new data sources with emphasis on the earthquake environmental effects
- 09:30-09:45 Nr. 8: "The National Observatory of Athens active faults of Greece database (NOAFAULTs) version 2023"
Athanassios Ganas, Varvara Tsironi, Eirini Efstathiou, Emmanouela Konstantakopoulou, Nikoletta Andritsou, Vasileios Georgakopoulos, Christina Tsimi, Anna Fokaefs and Nikolaos Madonis
- 09:45-10:00 Nr. 9: "From shallow to very shallow image of the highly active Kefalonia – Zakynthos fault system"
Maria Filomena Loreto, Paraskevi Nomikou, Valentina Ferrante, Andrea Argnani, Daniela Accettella, Ramon Ametller, Alessandro Bubbi, Andrea Cova, Michela Dal Cin, Lorenzo Facchin, Matilde Ferrante, Andrea Fiorentino, Massimiliano Iurcev, Danai Lampidou, Irene Merino, Elisavet Nikoli, Marco Ligi, Filippo Muccini, Camilla Palmiotto, Lorenzo Petracchini, Stefania Romano, Roberto Romeno, Serafim Poulos, Marco Santulin, Mario Sanchez, Paolo Visnovic, Fabrizio Zgur, Athanassios Ganas and Cesar Rodriguez Ranero
- 10:00-10:15 Nr. 14: "Compressional interseismic deformation and crustal uplift through geodetic and geological investigations onshore Paliki peninsula, Cephalonia, Greece"
Varvara Tsironi, Athanassios Ganas, Sotirios Valkaniotis, Vassiliki Kouskouna, † Ioannis Kassaras, Asimina Antonarakou, George Kontakiotis, Evangelia Besiou, Efthimios Sokos and Ioannis Koukouvelas
- 10:15-10:30 Nr. 41: "Revision of the Focal Parameters of Earthquakes in the S-SE Of the Iberian Peninsula (1900-1962)"
Javier Fernández Fraile, Maurizio Mattesini and Elisa Buforn
- 10:30-10:45 Nr. 43: "Ambient Noise H/V Analysis in Lixouri, Kefalonia Island"
Nikolaos Sakellariou, Mariano García-Fernández, Maria-Jose Jiménez, Vasiliki Kouskouna, Nikolaos Galanos and Ioannis Spingos

- 10:45-11:00 Nr.59: "Preliminary Analysis of the scaling laws of the Kefalonia Mw 6.1 (January 26, 2014) earthquake aftershock sequence in terms of Non extensive statistical Physics."
Filippos Vallianatos, Georgios Michas and Kyriaki Pavlou
- 11:00-11:30 Coffee Break ☕ Poster Session

SESSION 6 | SEISMOTECTONICS

Chairpersons: Athanassios Ganas – Hector Perea

- 11:30-12:00 **Invited Lecture: Ritsa Papadimitriou**
Seismicity and Geodynamics of central Ionian Islands, Greece: An Overview
- 12:00-12:15 Nr. 20: "Exploiting the Best of Both Worlds: a Journey from the Catalogue of Strong Earthquakes in Italy (CFTI) to the Database of Italy's Seismogenic Sources (DISS), and Back"
Gianluca Valensise, Pierfancesco Burrato, Umberto Fracassi, Gabriele Tarabusi and Paola Vannoli
- 12:15-12:30 Nr. 25: "A Probabilistic Seismic Hazard Assessment for Kefalonia and Ithaca (Western Greece)"
George Kaviris, Angelos Zymvragakis, Vasilis Kapetanidis, Ioannis Spingos, Nikolaos Sakellariou, Nikolaos Galanos, Vasiliki Kouskouna and Nicholas Voulgaris
- 12:30-12:45 Nr. 29: "Site effects at the seismological stations in the islands Of Kefalonia and Lefkada"
Despina Kementzetzidou, Vasilios Karakostas and Daniel Amorese
- 12:45-13:00 Nr. 37: "Contribution of the local Paliki seismological stations to the monitoring of seismicity in the area of Cephalonia Island, Greece, assessed by machine-learning and probabilistic event detection methods"
Vasilis Kapetanidis, Ioannis Spingos, Vasiliki Kouskouna, Nikolaos Sakellariou, Nikolaos Galanos and George Kaviris
- 13:00-13:15 Nr. 44: "Large ($M_w \geq 6.0$) earthquakes recurrence times and stress evolution in Kefalonia Transform Fault Zone"
Christos Kourouklas, Eleftheria Papadimitriou and Vasileios Karakostas

- 13:15-13:30 Nr. 45: "The 8 September 2022 Mw5.5 earthquake off-shore Kefalonia Island and its aftershock sequence- Preliminary analysis and seismotectonic implications"
Pavlos Bonatis, Vasileios Karakostas, Eleftheria Papadimitriou and Christos Kourouklas
- 13:30-14:30 Lunch Break

HISTORICAL EARTHQUAKES, MACROSEISMOLOGY | SESSION 7

Chairpersons: **Andrea Rovida – Vicki Kouskouna**

- 14:30-15:00 **Invited Lecture: Levent Gulen**
The 6 February, 2023 M w =7.8 and M w =7.6 Earthquake Doublet in Southeastern Türkiye
- 15:00-15:15 Nr. 10: "The impact of environmental effects triggered by the 6 February 2023 Turkey-Syria earthquakes on the type and distribution of building damage"
Spyridon Mavroulis, Emmanuel Vassilakis, Ioannis Argypoulos, Panayotis Carydis and Efthymis Lekkas
- 15:15-15:30 Nr. 16: "European Historical Earthquakes in the Middle Ages and Renaissance: A Critical Review of Historical Sources and Earthquake Catalogues between 284 and 1550"
Pierre Alexandre, Dominique Alexandre-Lamotte and Koen Van Noten
- 15:30-15:45 Nr. 27: "Macroseismic Effects of the Seismic Sequence Starting on 22nd of May 2023 in the Western Part of Romania"
Iren Adelina Moldovan, Eugen Oros, Adina Vanciu Rau, Angela Petruta Constantin, Mihail Diaconescu, Marius Liviu Manea and Mihail Lungu
- 15:45-16:00 Nr. 33: "The Database of the Catalogue of Strong Earthquakes in Italy and in the Mediterranean Area (CFTI): Exploring Historical Seismology Through Modern Web Tools"
Gabriele Tarabusi, Giulia Sgattoni, Gianluca Valensise and Cfti Working Group
- 16:00-16:15 Nr. 56: "The Lixouri Projects INFRASEPREL, KNETSEISRL ACTCIPROL"
Vasiliki Kouskouna, Athanassios Ganas and †Ioannis Kassaras
- 16:15-16:45 Coffee Break ☕ Poster Session
- 16:45-17:15 Wrap Up
- 19:00 TBA

07:45 Field trip

POSTER PRESENTATIONS

- POSTER 1 "The Xianshuihe fault zone and the 2022 Luding earthquake (M6.8), East Tibet plateau", **Chuanyou Li, Kai Sun, Jun Ma, Junjie Li and Mingjian Liang**
- POSTER 2 "Latest quaternary active faulting and Paleoseismology of the restraining bend in the Xianshuihe Fault Zone, Eastern Tibetan Plateau", **Jun Ma, Bengang Zhou, Mingming Wang, Guanghao Ha and Zhinan Lu**
- POSTER 6 "POSEIDON: Seismic Hazards in the west Peloponnese - Ionian Islands Domain", **Cesar R. Ranero, Paraskevi Nomikou, Filomena Loreto, I. Merino, V. Ferrante, D. Lampidou, E Nikoli and S. Poulos**
- POSTER 13 "Deformation Pattern and Mapping of Earthquake ruptures of the 6 February 2023 M7.8 & M7.6 earthquakes (Türkiye) through sub-pixel correlation method on InSAR", **Varvara Tsironi and Athanassios Ganas**
- POSTER 19 "MacrosisData : Safeguarding and promoting the heritage of French macroseismic surveys carried out between 1921 and 1996.", **Christophe Sira, Solène Malerba, Lucile Schirr, Véronique Bertrand and Marc Schaming**
- POSTER 24 "Macroseismic study of major trans-border historical earthquake-effects on Romania", **Angela Petruta Constantin and Mihail Diaconescu**
- POSTER 26 "Discrepancy Between Traditional and Online Intensities – Revisiting the Relation Between Two Different Macroseismic Datasets in Belgium", **Ben Neefs and Koen Van Noten**
- POSTER 28 "Earthquake Detection and Rapid Notification in Kefalonia island (Greece): A Machine Learning Approach", **Parthena Paradisopoulou and Ioanna Karagianni**

- POSTER 30 "Using ultra-high resolution methodologies to imaging active submarine faults: The STRENGTH 2023 cruise in the Alboran sea", **Hector Perea, Sara Martínez-Loriente, Ariadna Canari-Bordoí and Strength Cruise Party**
- POSTER 31 "Reassessing seismicity and seismic hazard in offshore areas: The case of the Alboran Sea (western Mediterranean)", **Hector Perea, María José Jiménez, Lucía Lozano, José Luis Sánchez Roldán, Octavi Gómez Novell, Ariadna Canari, Mariano García Fernández and Julián García Mayordomo**
- POSTER 34 "Advanced Web Tools in Historical Seismology: the CFTI Laboratory Experience ", **Giulia Sgattoni, Gabriele Tarabusi, Gianluca Valensise, Cecilia Ciuccarelli, Maria Giovanna Bianchi, Caterina Zei and Cfti Working Group**
- POSTER 42 "Sílex Project: low-cost accelerometers", **Javier Fernández Fraile, José Luis Blanco Puerto, José Benito Bravo Monge and Juan Vicente Cantavella Nadal**
- POSTER 46 "Evaluating the performance of Smoothed Seismicity Models at the Central Ionian Islands", **Polyzois Bountzis, Christos Kourouklas, Pavlos Bonatis and Vassilios Karakostas**
- POSTER 47 "Digitising Analog Seismograms: The Hidden Treasure", **Aggeliki Barberopoulou, Vasiliki Kouskouna and Sarah Firth**
- POSTER 54 "Macroseismic revisiting the 1953 Kefalonia great earthquakes", **Vasiliki Kouskouna, Nikolaos Sakellariou, Nikolaos Galanos and Gerasimos Sotiriou Galanos**
- POSTER 58 "A modern view of Statistical Seismology in terms of Tsallis entropy", **Filippos Vallianatos**



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ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
Εθνικό και Καποδιστριακό
Πανεπιστήμιο Αθηνών



ΔΗΜΟΣ ΛΙΞΟΥΡΙΟΥ
Municipality of Lixouri



ΠΕΡΙΦΕΡΕΙΑ
ΙΟΝΙΩΝ ΝΗΣΩΝ



Ελληνική Γεωλογική Εταιρεία
Geological Society of Greece