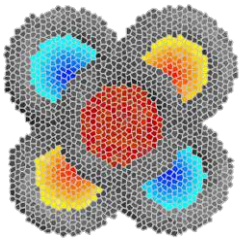
FAULT2SHA ESC Working Group
https://fault2sha.net/

FIRST CALL

Fault2SHA 4th Workshop



FAULT COMPLEX INTERACTION:

Characterization and Integration into Seismic Hazard Assessment (SHA)
Institut Ciències del Mar - CSIC
Barcelona 3rd-5th June 2019

WHAT'S NEW?

This is the first call for the 4th Fault2SHA Workshop. A preliminary call with basic information was issued last year in November.

The present call produces new information on:

- Way to contribute to the workshop
- Instructions for preparing an abstract
- Deadlines for sending abstracts and registration
- The preliminary Program of the workshop
- Keynote lecture speakers
- Grants

More than 50 people has shown so far their interest in attending to the meeting.

Scope

Earthquake ruptures can be accommodated in a complex manner by interaction among faults of very different characteristics, as it has been observed in recent large earthquakes (e.g. 2010 El Mayor Cucapah; 2016 Kaikoura). Modern seismic hazard assessment should thus consider fault-sources as an interacting system.

This **4th workshop of the Fault2SHA ESC Working Group** will be devoted to complex-interacting earthquake fault systems, including discussion on available data (paleoseismological, geodetic, seismological, case histories) as well as on approaches for their modelling and integration into SHA. The meeting's motto is "**InterAction**". Not just because we want to debate about fault interaction as one of the main processes leading to complexity in active fault systems, but because we are looking forward to achieving effective communication between data providers, modelers and hazard analysts.

We want to bring together earthquake scientists from different disciplines to interact and discuss together field evidence of complex fault ruptures and modelling approaches for SHA. Earthquake geologists, geodesists, seismologists, fault modelers and seismic hazard analysts are welcome.

The facilities and format of the workshop limit the number of participants to ~ 65.

The meeting will be organized in three special sessions to encompass both the collection of fault-rupture and slip rate data, as well as fault-hazard modelling approaches and uncertainty consideration;

it will include a session focused on the Eastern Betics Shear Zone (SE Spain), one of the working laboratories of the Fault2SHA WG. To foster InterAction, it is also planned to have a Round Table to stimulate discussions on hot topics.

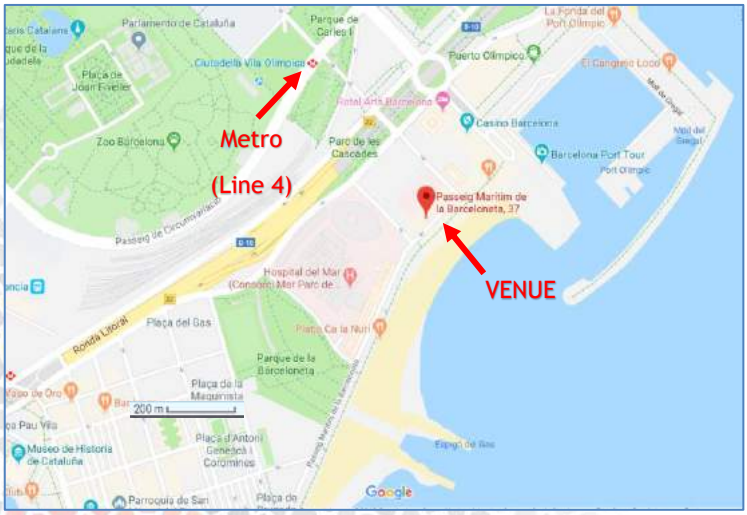
Practical information

Venue

The meeting will be held in Barcelona (Spain) at *Institut de Ciències del Mar* (ICM; www.icm.csic.es) (Passeig Marítim de la Barceloneta, 37).

The venue is 1 hour away from the airport, and around 20 min from the city center. Cheapest transport from the airport are by underground or bus at www.tmb.cat/en/home.

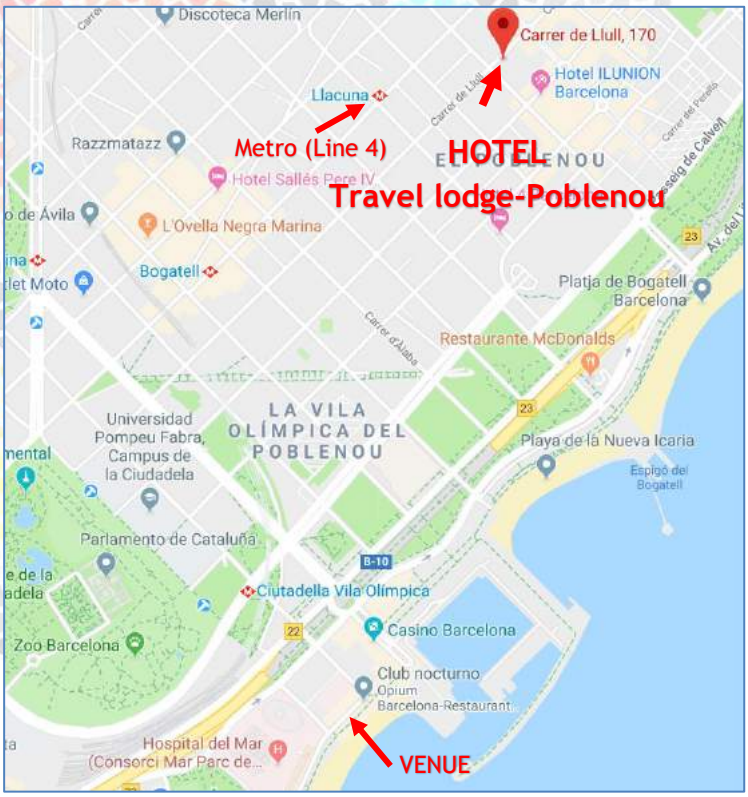
Nearest metro stop (300 m) is **Ciutadella Vila Olímpica on Line 4.**



Registration Fee: 320 euros

Registration includes three regular meals (lunch of Monday, Tuesday and Wednesday), a social dinner (Tuesday), coffee breaks and snacks during the workshop, as well as two nights' accommodation breakfast included in double room (Monday and Tuesday) at ***Hotel Travelodge-Poblenou*** www.travelodge.es/hotel-en-poblenou-barcelona. Additional accommodation, depending on the number of participants is planned at Residencia Campus del Mar.

Nearest metro stop is **Llacuna or Poblenou, both on Line 4.** The hotel is 2 metro stops away from the venue.



Grants

Conference grants (200 € registration fee) will be available for Master and PhD Students joining the meeting.

FIRST CALL

DEADLINES

Abstract submission: **31st March**

Registration: **12th April**

SESSIONS

The workshop will consist of three sessions and a round table:

Session 1 - The EBSZ (SE Iberia) lab: advances in earthquake geology research and seismic hazard modelling. The Eastern Betics Shear Zone (EBSZ) is a complex fault system that extends for more than 400 km formed by faults of different geometry, kinematics and slip rates. Whether these faults may be able to rupture together in a complex interacting way is a major concern and a current hot research topic. This session aims to analyze and discuss recent studies on the EBSZ with a focus on earthquake geology and implications in SHA, as well as seismic hazard models of the area.

Session 2 – Earthquake fault rupture and slip complexities: How-To OBSERVE them from FIELD data? This session is dedicated to show and discuss worldwide data obtained from field and/or seismological research that may be interpreted as evidence for complex earthquake ruptures in fault systems and/or slip rate variability e.g.: multi-fault ruptures, triggered ruptures, clustering and episodic behavior.

Session 3 – Earthquake fault rupture and slip complexities: How-To MODEL them in SHA? This session is the natural extension of the previous one into the practical field of seismic hazard assessment (SHA). This session is open to research done on exploring and/or testing approaches for modelling complex fault interaction in seismic hazard analysis, e.g., multi-fault ruptures and magnitude-frequency distributions, time-dependent models and paleoseismic data, episodicity and fault interaction. Contributions from the physics-based community are welcome too.

WAY TO PARTICIPATE

Contributions to the workshop will follow a "**flash talk**" format: 5 minutes oral presentation, 2-3 slides maximum, no time for questions during the oral session but during the poster session.

It is **strongly** recommended that flash talks have a companion **poster**. Note that specific time for in-person discussion of flash talks / posters will be provided. Posters will be visible throughout the duration of the workshop –maximum size A0.

ABSTRACTS

Submission of abstracts has to be done using the **website form** http://fault2sha.net/abstract-form/

Abstracts must contain the title of the contribution, the authors (names and affiliations), and a brief summary of the research in just 1 paragraph, 1800 characters max.

Deadline for abstract submission is **31st March**.

After the receipt of the workshop acceptance, deadline for registration and payment is **12th April.**

PRELIMINARY PROGRAM

JUNE 3, MONDAY

Arrival of participants during the morning.

12:00 – 13:00 Registration at the venue

13:00 – 14:00 *Lunch (included in the registration fee)*

14:00 – 14:30 Welcoming and opening of the workshop

14:30 – 15:30 Keynote Lecture on the *Eastern Betics Shear Zone Seismic Hazard*, by:

Eulalia Masana (Univ. Barcelona) & Belén Benito (Univ. Politécnica de Madrid)

15:30 – 16:30 Flash Talks

16:30 – 17:00 *Coffee Break*

17:00 – 18:00 Invited Lecture on the *Kaikoura Earthquake: Lessons learnt*, by:

Kelvin Berryman (GNS Science, New Zealand)

18:00 – 18:30 Flash Talks

18:30 – 19:30 Time for visiting posters and interaction!

JUNE 4, TUESDAY

08:30 – 9:30 Keynote Lecture on *Observation of fault complexity in the field*, by:

Tom Rockwell (San Diego State University, USA)

9:30 – 10:30 Flash Talks

10:30 – 11:00 *Coffee Break*

11:00 – 12:00 Keynote Lecture on *Causes and ways for modelling complexity in SHA*, by:

Bruno Pace (Università degli Studi G. d'Annunzio Chieti e Pescara, Italy)

12:00 – 13:00 Flash Talks

13:00 – 14:30 *Lunch (included in the registration fee)*

14:30 – 15:30 Flash Talks

15:30 – 16:30 *Coffee Break*

16:30 – 17:30 Flash Talks

17:30 – 19:30 Time for visiting posters and interaction!

21:00 *Social Dinner (included in the registration fee)*

JUNE 5, WEDNESDAY

08:30 – 10:30 Round Table on *Earthquake supercycles and Earthquake conversations*:

Lead by Lucilla Benedetti (CEREGE, France) and J. García-Mayordomo (IGME, Madrid)
Others guests will be specified in the second call

10:30 – 11:00 *Coffee Break*

11:00 – 13:00 Wrap up of workshop. Discussion on Fault2SHA next steps (COST & ITN funding proposals). Farewell.

General contact & committees

General information

The FAULT2SHA ESC working group (www.fault2SHA.net) is open to field geologists, seismologists, fault modelers and hazard analysts, willing to share ideas, data, modelling approaches or scientific code that promote the understanding between earthquake scientists from different backgrounds and improve our knowledge about fault behavior and its inclusion into seismic hazard assessment. To be updated on the ongoing initiatives, became a WG member by filling this form.

Main contacts

Eulàlia Gràcia (ICM, egracia@icm.csic.es)
Julián García-Mayordomo (IGME, julian.garcia@igme.es)
María Ortuño (UB, maria.ortuno@ub.edu)

Host organizing committee

University of Barcelona (UB): María Ortuño, Eulàlia Masana, Octavi Gómez-Novell, Gia Kzhazaradze, Robert López, Raimon Pallàs

Institute of Marine Sciences (ICM-CSIC): Eulàlia Gràcia, Hèctor Perea, Rafa Bartolomé, Cesar Ranero

IGME (Geological Survey of Spain): Julián García-Mayordomo

Supporting and Scientific committee

Members of the Fault2SHA Executive Committee: Oona Scotti (IRSN, France), Laura Peruzza (OGS, Italy), Bruno Pace (Università Chieti-Pescara, Italy), Francesco Visini (INGV, Italy), Lucilla Benedetti (CEREGE, France), Graeme Weatherill (GFZ, Germany), Joana Faurer-Walker (UCL, United Kingdom), Julián García-Mayordomo (IGME, Spain), Maria Ortuño (UB, Spain)