

Subduction Interface Processes (SIP)



An international conference zooming on subduction zones

On the nature and complex interplay between mechanical and chemical processes acting along/across subduction plate interfaces

April 19-21*, 2017

A conference organized in Castelldefells, Barcelona

Keynote speakers:

Geoffrey A. Abers, Lamont-Doherty Earth Observ., USA
Don Fisher, Penn State University, USA
Harry Green, UC Riverside, USA
Suichi Kodaira, JAMSTEC, Japan
Horst Marshall, Goethe Universitaet Frankfurt, Germany
Lisa McNeill, Nat. Oceanogr. Center Southampton, UK
Jean- Mathieu Nocquet, Géosciences Azur, France
Hugues Raimbourg, Université d'Orléans, France
Stephan Sobolev, Helmholtz C. Potsdam-GFZ, Germany
Kelin Wang, Geological Survey, Canada

Conference milestones

Early Registration Deadline: **February 1st, 2017**
Late Registration Deadline: **March 15th, 2017**
Abstract Submission Deadline: **February 15th, 2017**
* ice-breaker party on the evening of the 18th

Conference webpage

<http://www.iplusdinnova.com/es/zip2017>

Scope

Building on the recent wealth of data and models dealing with plate-slab interface processes, we welcome in this conference **contributions at the crossroads between all different disciplines**, including surface processes, structural geology and geodynamics, petrology, rheology, geochemistry, geophysics and all types of numerical modeling. One of the overarching goals is also to bridge the gap between the various Earth Science communities and foster future collaborations.

Special emphasis will be placed on recent advances that provide novel information on the nature and properties of the subduction plate interface. This **Subduction Interface Processes (SIP)** conference aims at promoting thorough discussions by addressing some fundamental questions such as:

- What controls the size, location, physical limits, frequency and behaviour of earthquake ruptures along the inter-plate boundary?
- How are stresses and energy release, via earthquakes and fluid-mediated mass transfer, focused on the plate interface?
- What is the nature and structure of the subduction interface (which lithologies, heterogeneities, rheologies, fluids,...) and what is their bearing on earthquake ruptures and long-lived deformation?
- How can we bridge the gap between observations made at rock and plate scale, or between signals lasting from seconds to millions of years?
- Are we able to image and understand physical conditions and processes at work along the subduction interface at relevant scales, such as years and meters?

After topical sessions organised at EGU (2011-2014), AGU (2015-2016), this **Subduction interface Processes (SIP)** conference is conveniently organized right before the EGU 2017 meeting!

SIP is **an initiative from the European-funded Initial Training project "ZIP" (Zooming in between plates)**. It is also closely tied to the EFIRE NSF-PIRE project^a, the 'Subduction across scales' International Lithosphere Programme task force^b and the Subduction Top to Bottom 2 publishing initiative^c.

Programme

The key objective of this conference is to encourage discussions: authors should be as provocative and stimulating as one can be!

Organization details:

- one single oral session with 3-4 keynote lectures / day (no parallel sessions), with a twofold focus (see the two parts below): characterization and integrated processes.
- posters on display for the whole duration of the Conference (we recommend oral presentations be prepared as posters as well to ensure maximum discussion and dissemination)
- open discussion every evening (5:30-6:30 pm) with keynote speakers and moderators, thereby progressing towards a refined vision of the subduction interface.

Part 1: Nature and characterization of the plate boundary

- High-resolution imaging, petrophysical properties
- Control on earthquake nucleation/rupture/arrest
- Transients and microseismicity
- Rock diversity on the interface (at all relevant scales)
- Distribution of deformation along/across the boundary
- Fluid/mass transfer and source/time contributions

Part 2: Plate interface processes through space & time

- Linking geodetic/geophysical with petrological/petrophysical data
- Linking post/inter-seismic deformation after large earthquakes, with hazard or long-lived deformation
- Linking deformation, mineral reactions and fluid flow
- Modelling, 1: from the seismic cycle to long-lived deformation, including fluid/melt transport
- Modelling, 2: from rock mixing to geodynamic models

Keynote presentations: 30' long (25' + 5' for questions).
Other oral presentations will be 15' long (12' + 3').
Posters: to be prepared in Landscape format

Venue

Within the frame of the **European Initial Training Project "ZIP"** (Zooming in between plates²), the **Spanish National Research Council (CSIC)**, through the **Barcelona Center for Subsurface Imaging (Barcelona-CSI)** of the **Institute of Marine Sciences (ICM)**, together with its partners and associated partners from the European ZIP Project cordially invite you to participate in this international conference.

²Grant Agreement N° 604713, FP7-PEOPLE-2013-ITN

The Subduction Interface Processes (SIP) conference will be held in the [Congress Center](#) of the [Hotel Rey Don Jaime, Castelldefels](#) (see [Location Map](#)), conveniently located 15 minutes away from the Barcelona international airport (25-30€ taxi ride). It provides easy access to Barcelona by taxi or public transportation. Be prepared for a pleasant, mild climate at this time of the year too!



See registration options below for information on accommodation. All meals will be provided in the Hotel and are included in the registration fee. All meals are based on local products whenever possible.



Conference Registration*

Registration is made online (visit [conference webpage](#)). Payment can be done either by bank transfer or credit card. Four options have been designed for the registration:

OPTION 1: Includes conference fee, hotel accommodation in an **individual room**, lunch and dinner for the conference days and one social dinner. The cost is 660 € for early registration and 760 € for late registration.

OPTION 2: Includes conference fee, hotel accommodation in **shared room**, lunch and dinner for the conference days, and one social dinner. The cost is 540 € for early registration and 640 € for late registration.

OPTION 3: Only conference and lunch for the conference days. it **does not include hotel accommodation**. The cost is 395€ for early registration (490€ for late registration).

OPTION 4: This is only for room partners not attending the conference. Includes hotel accommodation in **shared room**, lunch and dinner for the conference days. The cost is 385€.

IMPORTANT!! : If you want to stay longer (in particular on the night of friday 21st) or arrive earlier in the hotel, you must contact directly GRAN HOTEL REY DON JAIME and let them know that you will be at this meeting first.

(*) **The organization has limited funding to cover part of the registration expenses for young students.** This will be treated on a case-by-case basis. If you are interested, please contact organizers at zip2017@icm.csic.es

Conference Proceedings

A selection of contributions from the Subduction Interface Processes conference will be submitted for publication as a special issue of [Lithos](#). The expected deadline of manuscript submission will be October 1st, 2017. We would appreciate your early expression of interest to contribute to this publication. We will compile a preliminary list of contributions for the publisher during the conference.

Organizing Committee

Philippe Agard - UPMC, Inst. Sciences de la Terre à Paris
Cesar R. Ranero - Barcelona-CSI, ICREA at CSIC, Institute of Marine Sciences
Valenti Sallares - Barcelona-CSI, Institute of Marine Sciences, CSIC
A. Carrillo, UPMC / S. Incel, ENS / I. Ioannidi, GFZ

Scientific Committee

- Philippe Agard - UPMC, Paris
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- Michael Bostock - Univ. British Columbia, Vancouver
- Jun Gao - Chinese Academy of Sciences, Beijing
- Carlos Garrido - CSIC, Granada
- Taras Gerya - ETH, Zurich
- Timm John - Freie Universitaet, Berlin
- Laetitia Le Pourhiet - UPMC, Paris
- Thomas Meier - Christian-Albrechts-Universitaet, Kiel
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- Gerassimos Papadopoulos - National Observatory, Athens
- Sarah Penniston-Dorland, Univ. Maryland
- Thomas Pettke - Universitaet Bern
- César Ranero - ICREA, Barcelona
- François Roure - IFP-EN, Paris
- Valenti Sallares - CSIC, Barcelona
- Marco Scambelluri - Università degli Studi, Genova
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- Paola Vannucchi - Royal Holloway, London
- Christophe Vigny - CNRS, Paris

Organizing Institutions

