

**EARTHTIME-EU – Final report Science meetings:  
9th International Workshop on Agglutinated Foraminifera (IWAF-9)**

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## 1) Summary

The ninth edition of the *International Workshop on Agglutinated Foraminifera* (IWAF-9) was held at the University of Zaragoza (Department of Earth Sciences) on September 3rd-7th 2012.

The latest studies on recent and fossil Agglutinated Foraminifera (taxonomy, ecology, evolution, biostratigraphy and applications in geology and environmental studies) were presented during the workshop. This group of unicellular organisms constitutes a pivotal tool in biostratigraphy, stratigraphic correlation and environmental reconstructions, and thus attracts the attention of researchers and professionals not only in universities and research centres, but also in oil companies. As a result of this increasing interest, 53 scientists from 19 countries and 4 continents attended the 9th *International Workshop on Agglutinated Foraminifera*.

The meeting consisted of three days of technical sessions and a post-conference field trip to the Basque-Cantabrian basin, where some of the best and world-famous Paleogene flysch deposits are exposed. The IWAF-9 was organized by Laia Alegret (University of Zaragoza), Silvia Ortiz (University of the Basque Country) and Michael A. Kaminski (King Fahd University of Petroleum & Minerals), plus 4 students from Zaragoza University who volunteered to help during the workshop and post-conference field trip.

The high quality of the 56 contributions (30 posters and 26 oral presentations), the friendly and cooperative atmosphere and the interesting scientific meetings and discussions, the organization of a practical seminar on Iberian benthic foraminiferal assemblages during the first day of the workshop, the visit to unique Paleogene outcrops in the Basque coast, the publication of an abstract book and a field trip guide, and our agreement on publishing an extended abstract volume, have contributed to the success of the IWAF-9.

## **2) Description of the scientific content of and discussion at the event**

### ***Scientific sessions***

The annual meeting of the Working Group on Foraminiferal Classification took place during the first day of the meeting (September 3<sup>rd</sup>). The latest results on phylogeny and classification of foraminifera, including unpublished results on molecular phylogeny, were discussed during this meeting. A supraordinal classification based on molecular data was proposed, with agglutinated foraminifera being included in all class-level groups. Multiple origins of the agglutinated wall confirm its importance as a major trend in evolution of Foraminifera and its prerequisite for the development of multilocular test.

A parallel seminar on *Upper Cretaceous to Eocene benthic foraminiferal assemblages from Iberian sections* was celebrated in the Micropaleontological Laboratory of the Department of Earth Sciences. Numerous slides containing the most representative specimens were studied with stereomicroscopes in the laboratory, arising interesting discussions on taxonomy. The seminar was very successful, and the laboratory was full during the whole day.

The IWAF-9 technical sessions were held in the main conference room of the Geology building on September 4<sup>th</sup> and 5<sup>th</sup>. The opening lecture was given by Prof. Johann Hohenegger (University of Vienna), who gave an interesting talk on the species as the basic units in evolution, biodiversity and biostratigraphy.

The 25 oral presentations were included in five thematic sessions, each one being opened by a keynote lecture:

#### **Session 1: Systematics.**

Findings of new agglutinated foraminifera, reinvestigation of several genera and molecular comparison between species, investigations on the origin of the agglutinated wall, and a revision of the classification of Agglutinated Foraminifera were presented during this session.

Keynote: Multiple origins of the agglutinated wall and the high-level classification of Foraminifera. By: Jan Pawlowski and Maria Holzmann - University of Geneva (Switzerland).

#### **Session 2: Evolution and techniques.**

In addition to the keynote lecture on design and morphogenesis of the agglutinated chambers, a comprehensive introduction to the StrataPlot graphic correlation software was given by Emil Platon.

Keynote: Foraminiferal design: Morphogenesis of agglutinated chambers. By: Jarosław Tyszka - Institute of Geological Sciences PAN (Poland).

#### **Session 3: Biostratigraphy.**

Several talks on the application of agglutinated foraminiferal biostratigraphy from the Triassic to the Cretaceous were given during this session.

Keynote: Sequence stratigraphic application of foraminiferal facies patterns: Triassic and Jurassic examples. By: Jenő Nagy - University of Oslo (Norway).

#### **Session 4: Paleoecology and paleoenvironments.**

The application of agglutinated foraminifera in paleoenvironmental and paleogeographical reconstructions of critical events was highlighted in this session.

Keynote: Agglutinated benthic foraminifera during ocean acidification: what holds them together?. By: Ellen Thomas - Yale and Wesleyan Universities (USA).

### **Session 5: Ecology.**

Numerous studies on recent foraminifera, their ecology and their environmental implications were presented in this session.

Keynote: Benthic foraminiferal squatters: species that inhabit the tests of other foraminifera. By: Andrew J. Gooday - National Oceanography Centre, Southampton (UK).

Two poster sessions were scheduled in the afternoons in September 4<sup>th</sup> and 5<sup>th</sup>. A total of 30 poster presentations and long, very constructive discussions took place during these two sessions.

The closing ceremony was held after the scientific sessions (oral and poster presentations) on September 5<sup>th</sup>. Different options of how to publish the extended papers related to this meeting were discussed. The final decision was to publish these manuscripts in a special volume of the Grzybowski Foundation (*Grzybowski Foundation Special Publication*, n° 19). Additionally, if there are enough people interested in an alternative option, a special volume will be edited in the journal *Micropaleontology*.

Three awards were given during the closing ceremony: Prof. Johann Hohenegger (University of Vienna) received the Grzybowski Award, which celebrates sustained and significant contributions to the field of Micropalaeontology, especially with regard to research on the Agglutinated Foraminifera. The students Ane García-Artola (University of the Basque Country) and Flavia Boscolo-Galazzo (University of Padova) were awarded the Best Oral and Poster presentation Awards, respectively.

### **Scientific field trip**

Some world-reference Paleogene outcrops were visited during the field trip to the Basque-Cantabrian basin, on September 6<sup>th</sup> and 7<sup>th</sup>. Foraminiferal-rich Upper Cretaceous to lower Eocene sediments were examined in Zumaya (Vizcaya), Sopelana and Gorrondatxe (Guipuzcoa). The field trip was lead by Laia Alegret (University of Zaragoza), Silvia Ortiz, Juan Ignacio Baceta and Aitor Payros (University of the Basque Country), who gave extensive explanations at each outcrop and wrote a field trip guide with information on the different outcrops and their micropaleontological content.

### **3) Assessment of the results and impact of the event on the future direction of the field**

The abstracts presented in this meeting have been published in a special volume of the *Grzybowski Foundation* (n° 18). In addition, a field trip guide was published to complement the explanations of the field trip leaders during the scientific excursion. Both volumes have been distributed among the main European libraries that contain a Micropaleontology section. These two volumes have also been sent by post to the European Science Foundation (Anne-Sophie Gablin; Life, Earth, Environmental & Polar Sciences):

- Alegret, L., Ortiz, S. & Kaminski, M.A. (eds), 2012. Ninth International Workshop on Agglutinated Foraminifera. *Grzybowski Foundation Special Publication*, **18**, 108 pp. ISBN: 978-84-92522-54-5
- Ortiz, S., Alegret, L., Baceta, J.I., Kaminski, M.A., Payros, A. (2012). *Cretaceous to Paleogene hemipelagic and flysch successions in Western Pyrenees, Northern Spain*. 9th International Workshop on Agglutinated Foraminifera Field trip guide. Servicio de Publicaciones de Zaragoza, 82 pp. ISBN: 978-84-92522-55-2

The extended manuscripts related to the abstracts presented in IWAF-9 will be published in the *Grzybowski Foundation Special Publication*, nº 19. These manuscripts will be submitted for review in January 2013. If there are enough people interested in an alternative option, a special volume will be edited in the journal *Micropaleontology*.

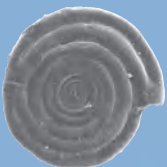
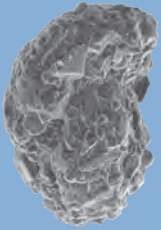
In addition to the IWAF-9 publications, intense discussions held during the meeting will encourage future investigations on various subjects, including the multiple origins of the agglutinated wall of foraminifera, the use of StrataPlot graphic correlation software, ecological studies, the application of agglutinated foraminifera as biostratigraphic and paleoenvironmental markers, and their use as tools to reconstruct critical events in Earth's history.

#### **4) Final programme of the meeting**

The final programme of IWAF-9 was included in a booklet that also included general information for the attendees. This booklet is attached in the following pages.

# **FINAL PROGRAMME**

**9th International Workshop on Agglutinated Foraminifera  
(IWAF-9)**



# WAF-9

9th International Workshop on  
Agglutinated Foraminifera (IWAF-9)

Zaragoza (Spain)  
3-7 September 2012

<http://iwaf9.unizar.es>



**Universidad**  
Zaragoza

Department of Earth Sciences  
University of Zaragoza



**FINAL PROGRAMME**

# Welcome

The Organizing committee of the 9th International Workshop on Agglutinated Foraminifera (IWAF-9) welcomes everyone to Zaragoza and to its University. We hope that this event will serve to bring together specialists from all over the world by fostering the sharing of ideas and collaboration in the study of agglutinated foraminifera.

The IWAF-9 continues a series of meetings devoted primarily to the systematics, (palaeo)ecology and evolution of the largest single group of foraminifera. The IWAF meeting in Zaragoza follows previous meetings held in Amsterdam (1981), Vienna (1986), Tübingen (1989), Kraków (1993), Plymouth (1997), Prague (2001), Urbino (2005) and Cluj-Napoca (2008). The main idea behind this meeting and this abstract volume is to present a general view of current research on the agglutinated foraminifera.

We hope you enjoy your stay in the historical city Zaragoza. The city, originally called Caesaraugusta by its founder, the Roman Augustus, then part of the Arab Emirate of Cordoba under the name of Saraqusta, became one of the taifa kingdoms in 1018 and thereafter the capital of the Kingdom of Aragon during the Aragonese era. Like other institutions, the University of Zaragoza had its beginnings in what were known as the Ecclesiastical Schools, whose guiding spirit in the 7th century was the Bishop Braulio (which is the reason why in modern times he was made the patron saint of our University). Later called School of Arts (14th century), it was made a General School of Arts in the 15th century, at the petition of Fernando, the future King of Aragon, and it became a university in the 16th century, during the Renaissance. Today, the University of Zaragoza has more than 35,000 students, and 56 departments offering 54 degrees and 52 master courses.

We would like to thank the participation of more than 57 scientists who registered for IWAF-9, and who submitted the 56 contributions that are included in this volume. These contributions are essential to the IWAF-9, and they will certainly make the most of this meeting through interesting discussions and presentation of the latest investigations on agglutinated foraminifera. The organizing committee has worked together enthusiastically to make this meeting possible, and this was in many ways a very pleasant task. We just hope to be able to create a good environment for discussions, and to make you feel like at home. If there's anything you need, just ask any of the members of the staff, and they will very happy to help!

We take this opportunity to thank our sponsors, who contributed to the organizational costs of the meeting. We want to thank the University of Zaragoza (Vicerrectorado de Investigación), IUCA (Instituto Universitario de Investigación en Ciencias Ambientales de Aragón), the Spanish Ministry of Competition and Innovation, the European Science Foundation, The Micropaleontological Society and the Grzybowski Foundation for financial support, the Faculty of Sciences of Zaragoza University for letting us use their facilities, and Celka Microslides for providing some micropaleontological material.

We hope you enjoy the meeting, and wish you a very pleasant stay in Zaragoza.

The IWAF-9 Organizing Committee

## Programme at a glance

	MONDAY September 3		TUESDAY September 4	WEDNESDAY September 5	THR Sep 6	FRI Sep 7		
08:00			<b>8:30-9:00</b>		<b>8:00</b>			
09:00			Registration		Field trip	Field trip		
10:00	Registration	Working group on foraminiferal classification	<b>9:00 - 9:40</b>	<b>9:00 -10:10</b>				
			IWAF 9 opening	Session 4 PALEOECOL.				
11:00			<b>9:30-17:00</b>	<b>10:30-13:00</b>			<b>9:40-12:20</b>	Coffee break
				Exhibition benthic foraminifera			Coffee break	<b>10:40-15:50</b>
12:00							Session 1 SYSTEMATICS	Session 5 ECOLOGY
13:00							<b>12:20-13:10</b>	
							S.2 EVOL & TECH	<b>12:50-14:30</b>
14:00							<b>13:10-14:30</b>	Lunch break
							Lunch break	
15:00				<b>14:30-16:30</b>	<b>14:30-15:40</b>	Session 5 ECOLOGY		
		Exhibition benthic foraminifera	Session 3 BIOSTRATIGR.					
16:00			Coffee break	Coffee break				
17:00			<b>16:30-18:30</b>	<b>16:20-17:30</b>				
			Poster session	Poster session				
18:00	<b>17:30</b>	Guided visit to Aljafería Palace		<b>17:30</b>				
19:00				Closing ceremony & Awards				
20:00	<b>19:30</b>			<b>19:45</b>				
	Icebreaker party		Guided visit to Teatro Principal					
21:00			<b>21:00</b> Dinner		<b>20:30</b>			



# Zaragoza map



- ① Edificio Geológicas, Campus San Francisco - Registration and IWAF 9
- ② Palacio de la Aljafería - Monday 3 September
- ③ Paraninfo - Icebreaker party - Monday 3 September
- ④ Teatro Principal- Conference dinner - Wednesday 5 September

..... Tram

# Monday September 3rd

**-9:30-17:00 Registration.** Main hall of the Department of Earth Sciences (Geology Building = Edificio de Geológicas). **Posters** can be put up in Lecture Room 7 (Aula 7), ground floor.

**-9:30-16:30 Meeting of the Working Group on Foraminiferal Classification**

**-10:30-13:00 and 14:30-16:30 Exhibition of Upper Cretaceous to Eocene benthic foraminiferal assemblages from Iberian sections.** A collection of slides and washed residue will be available for those who wish to check the most representative benthic foraminifera from Iberian sections. Micropaleontological Laboratory, first floor.

**-17:30 Guided visit to the Aljafería palace,** which currently contains the regional parliament. A bus will depart from campus (meeting point A) at 17:30 sharp. After a 1 hour-visit to the palace, the bus will take us to the Paraninfo Building.

**- 19:30 Icebreaker party in the Paraninfo Building.** Those who miss the bus to the Aljafería Palace (17:30) can join the rest of the group for the icebreaker party going directly to the Paraninfo Building (Paraiso Square = Plaza Paraíso), which is at 15 min walking distance (also connected by tram) from the main campus, Campus San Francisco.



**Aljafería Palace**  
(9th century)  
Momentum declared  
a World Heritage Site



**Paraninfo Building**  
**University**  
**Assembly**  
**Hall**  
Plaza Paraíso, Nº4

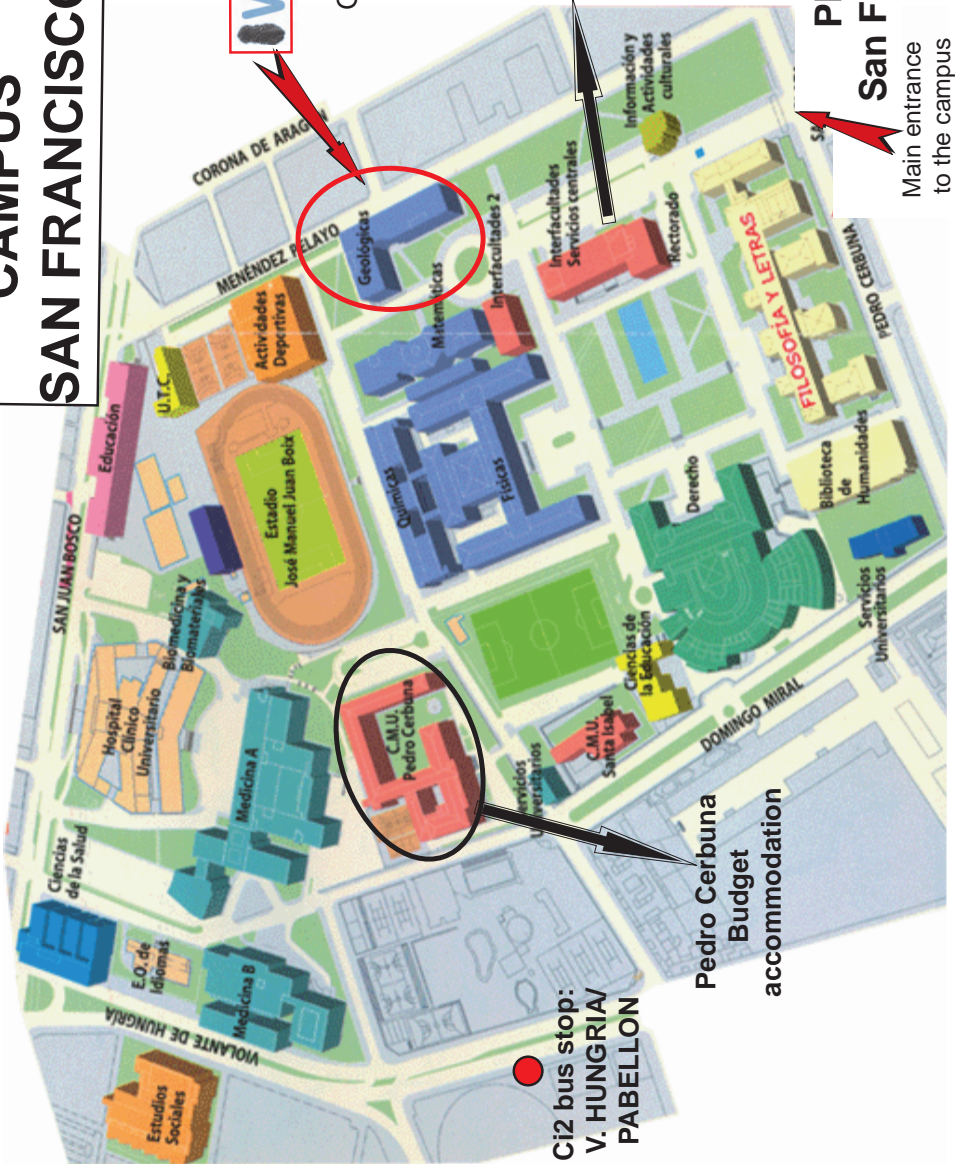
# CAMPUS SAN FRANCISCO



Edificio  
Geológicas

Meeting point A  
Interfacultades  
building

Plaza  
San Francisco  
Main entrance  
to the campus



Ci2 bus stop:  
V. HUNGRIA/  
PABELLON

Pedro Cerbuna  
Budget  
accommodation

### Monday 3 September

Start	End	Item
9:30	17:00	<b>REGISTRATION.</b> Main hall of the Department of Earth Sciences (Edificio de Geológicas)
9:30	16:30	<b>Meeting of the Working Group on Foraminiferal Classification</b>
10:30	13:00	<b>Exhibition of Upper Cretaceous to Eocene benthic foraminiferal assemblages from Iberian sections</b>
14:30	16:30	Micropalaeontological Laboratory, first floor
17:30		<b>Guided visit to the Aljafería Palace.</b> Bus leaves from campus (meeting point A) at 17:30 o'clock
19:30		<b>Icebreaker party.</b> Paraninfo Building

### Tuesday 4 September

Start	End	Item	Chairs	Speaker	Title
8:30	9:00	<b>REGISTRATION</b>			
9:00	9:10	<b>WORKSHOP OPENING</b>			
9:10	9:40	<b>Opening lecture:</b>		<b>Johann Hohenegger</b>	<b>Species as the basic units in evolution, biodiversity and biostratigraphy</b>
9:40	10:10	<p style="text-align: center;">Johann Hohenegger Danuta Peryt</p> <p style="text-align: center;">Session 1 SYSTEMATICS</p>		Keynote Jan Pawłowski & Maria Holzmann	Multiple origins of the agglutinated wall and the high-level classification of Foraminifera
10:10	10:30			Michael A. Kaminski	Revisions and Updates to the Classification of the Agglutinated Foraminifera
10:30	11:00			<b>COFFEE BREAK</b>	
11:00	11:20			Valeria Mikhailovich	Reinvestigation of two agglutinated genera of the order Textulariida (Delage et Herouard, 1896 Foraminifera)
11:20	11:40			Assad Ghazwani et al.	New agglutinated foraminifera, including multichambered taxa, from the Middle Ordovician Hanadir Shale of Northern Saudi Arabia
11:40	12:00			Maria Holzmann et al.	A molecular comparison of <i>Eritzia tetrastomella</i> and <i>Jadammina macrescens</i>
12:00	12:20			Michael A. Kaminski	New trochamminids with radially elongated chambers from the Paleozoic Black shales of Saudi Arabia: An adaptation for survival in dysoxic environments?
12:20	12:50	Session 2 EVOLUTION & TECHNIQUES	Jarosław Tyszcza Silvia Ortíz	<b>Keynote</b> Jarosław Tyszcza	<b>Foraminiferal design: Morphogenesis of agglutinated chambers</b>
12:50	13:10			Emil Platon	StrataPlot - a Graphic Correlation Software
13:10	14:30	<b>LUNCH BREAK</b>			
14:30	15:00	Session 3 BIOSTRATIGRAPHY		Jenő Nagy	Sequence stratigraphic application of foraminiferal facies patterns: Triassic and Jurassic examples
15:00	15:20			Michaël A. Kaminski	Late Cretaceous <i>Uvigerinamina jankoi</i> lineage in the Carpathian Flysch
15:20	15:40			Danuta Peryt	The Cenomanian/Turonian Boundary Event in the Sawin-19 borehole (SE Poland): restructuring of agglutinated foraminifera assemblages
15:40	16:30	<b>COFFEE BREAK</b>			
16:30	18:30	<b>Poster session &amp; Informal discussion</b>			

<b>Wednesday 5 September</b>				
Start	End	Item	Chairs	Speaker
9:00	9:30	Session 4 <b>PALEOECOLOGY</b> & <b>PALEOENVIRONMENTS</b>	Ellen Thomas Laia Alegrat	Keynote Ellen Thomas
9:30	Saleh Al Enezi et al.			
9:50	10:10			Eiichi Setoyama et al.
<b>10:10</b>	<b>10:40</b>	<b>COFFEE BREAK</b>		
10:40	11:10			Keynote Andrew J. Gooday
11:10	11:30			Eric Arminot Du Chatelet et al.
11:30	11:50			Ane Garcia-Artola et al.
11:50	12:10			Virginia Martins et al.
12:10	12:30			Mary McGann
12:30	12:50	Session 5 <b>ECOLOGY</b>	Andrew J. Gooday Fabrizio Frontalini	Salwa Sanatul Hasan et al.
<b>12:50</b>	<b>14:30</b>	<b>LUNCH BREAK</b>		
14:30	14:50			Mark D. Phipps et al.
14:50	15:10			Ashleigh Costelloe et al.
15:10	15:30			Andreea Telespan et al.
15:30	15:50			Lindsay Wilson et al.
<b>15:50</b>	<b>16:20</b>			<b>COFFEE BREAK</b>
<b>16:20</b>	<b>17:30</b>	Poster session		
<b>17:30</b>		Closing ceremony and Awards		
<b>19:45</b>		Guided visit to Teatro Principal		
<b>21:00</b>		Conference dinner. Teatro Principal		

<b>Thursday &amp; Friday 6-7 September</b>	
<b>8:00</b>	Field trip to the Basque Cantabrian basin (N Spain)



## Poster presentations

- P1** - Arreguín-Rodríguez G., L. Alegret and S. Ortiz  
What caused the *Glomospira* acme during the earliest Eocene?
- P2** - Anjos-Zerfass G. and G. Moreira Dos Reis  
Microtomography imaging of Paleocene-Eocene agglutinated foraminifera from the Cumuruxatiba Basin, northwestern Brazil
- P3** - Asgharian Rostami M. and M. Vahidinia  
Agglutinated benthic foraminifera and changes of paleoenvironment conditions across the Cretaceous-Paleogene boundary in the Galanderud section, Alborz basin, North of Iran
- P4** - Aturamu A., S. Kender, M. Williams and J. Zalasiewicz  
Glacial-interglacial changes in deep water ventilation and oxygenation in the Bering Sea, subarctic North Pacific: insights from fossilised deep sea biota
- P5** - Basso E., N. Mancin and M.A. Kaminski  
Petrography applied to Micropaleontology: some techniques to unravel the internal chamber subdivision and wall microstructure of agglutinated foraminifera
- P6** - Bindiu R., R. Balc and S. Filipescu  
Biostratigraphy and paleoenvironments of the Eocene deep water deposits from the northern part of the Eastern Carpathians, Romania.
- P7** - Boscolo Galazzo F. and L. Giusberti  
Agglutinated foraminifera of the Paleocene-Eocene transition in the Forada section (Southern Alps, northeastern Italy)
- P8** - Costa D.S. and M.C. Viviers  
Characterization of agglutinated benthic foraminifera biofacies in Upper Cretaceous sediments of the Brazilian equatorial margin
- P9** - Dias B.B., C.F. Barbosa, B. Allevato and C. Bonetti  
Foraminiferal assemblage in Barra Channel mangrove, Conceição Lagoon, southern Brazil
- P10** - Frontalini F., R. Coccioni and M.A. Kaminski  
Bathymetric distribution of recent agglutinated foraminifera from a transect in the Saros Bay and offshore Lesbos Island (central Northern Aegean Sea)
- P11** - Ghazwani A., M.A. Kaminski and L. Babalola  
New agglutinated foraminifera, including multichambered taxa, from the Middle Ordovician Hanadir Shale of Northern Saudi Arabia
- P12** - Govindan A.  
Agglutinated conical foraminifera from the Late Paleocene (Thanetian) carbonates of Cauvery Basin, south India
- P13** - Hess S., J. Nagy and G. Vestergaard Laursen  
Paleoenvironmental interpretations of Early to Middle Jurassic deposits of the southwestern Barents Sea based on benthic foraminiferal assemblages
- P14** - Kaminski M.A., G.W. Hughes and N. Hooker  
A "Flysch-type" agglutinated foraminiferal assemblage from the Lower Carboniferous black shales of northern Saudi Arabia
- P15** - Kaminski M.A. and S. Kender  
Pliocene dysoxic agglutinated foraminiferal assemblages from IODP Hole 1341B in the Bering Sea: Initial results from IODP Expedition 323

**P16** - Malata E.

*Trochammina quadriloba* (Grzybowski) sensu Geroch, 1960 in the Polish Outer Carpathians

**P17** - Malumián N. and C. Nájuez

The Cretaceous-Paleogene agglutinated foraminifera from the Magallanes or Austral Basin, southernmost South America

**P18** - Malumián N., C. Nájuez, G. Jannou and I. Arenillas

A conspicuous agglutinated new genus of calcareous cemented and perforate wall with remaneicid test morphology from the early Eocene southern high latitudes

**P19** - Mancin N., E. Basso, C. Pirini and M.A. Kaminski

Functional morphology and paleoecology of the agglutinated foraminiferal genus *Colominella* Popescu, 1998 in the Mediterranean Pliocene (Liguria, Italy)

**P20** - Omaña L., R. López Doncel and J.R. Torres

Mid-Late Cenomanian larger Agglutinated Foraminifera from W Valles-San Luis Potosí Platform, central-east Mexico

**P21** - Ortiz S., A. Payros, L. Alegret, X. Orue-Etxebarria, E. Apellaniz and E. Molina

Response of agglutinated foraminifera to an early Lutetian carbon-cycle perturbation at the Gorrondatxe section (western Pyrenees, Bay of Biscay)

**P22** - Ortiz S., A. Payros, I. Millán, X. Orue-Etxebarria and E. Apellaniz

Dominance of agglutinated benthic foraminiferal assemblages during the Early Eocene Climatic Optimum (EECO)

**P23** - Podobina V.M.

Recent data on the Upper Cenomanian foraminifera and biostratigraphy of the northern district of Western Siberia

**P24** - Reolid M., B.L. Nikitenko and L.A. Glinskikh

The record of Toarcian Oceanic Anoxic Event by agglutinated foraminiferal morphogroups from Northern Siberia

**P25** - Rivandi, B., M. Vahidi nia, M. Nadjafi and A. Mahbobi

Agglutinated foraminifera of the Paleocene/Eocene boundary in shallow setting (Chehel-Kaman Formation, Kopet-Dagh basin, Iran)

**P26** - Sanchez D.

Regional diversity of agglutinated foraminifera from western and eastern Venezuela (Neogene to Pliocene). A preliminary report

**P27** - Setoyama E., M.A. Kaminski and J. Tyszka

Palaeoenvironmental and palaeogeographic implications of Campanian agglutinated foraminifera from the Lomonosov Ridge (ACEX, IODP Expedition 302)

**P28** - Setoyama E., M.A. Kaminski and J. Tyszka

Morphogroup analysis of Late Cretaceous–Paleogene agglutinated foraminifera from Indian Harbor M-52 well, Labrador Sea

**P29** - Székely S.F. and S. Filipescu

Agglutinated foraminifera assemblages across the Oligocene-Miocene transition in north-western Transylvanian Basin

**P30** - Viviers M.C.

DWAF assemblages associated with turbidite depositional systems

## Tuesday September 4th

**8:30-9:00** Registration

**9:00-9:10** Workshop Opening. **Salón de Actos (Main Lecture Hall).**

**9:10-9:40** Opening lecture. Johann Hohenegger.

**9:40-18:30** IWAF-9 sessions and posters

## Wednesday September 5th

**9:00-17:30** IWAF-9 sessions and posters

**17:30** Closing ceremony and Awards:

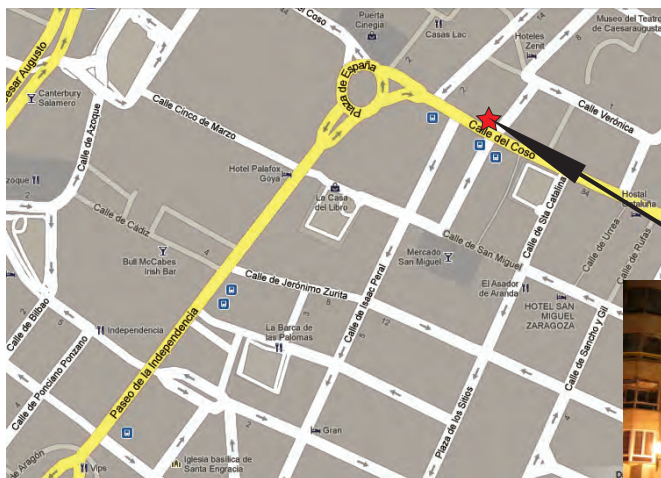
Annual Grzybowski Award

IWAF-9 Award for the best student oral presentation

IWAF-9 Award for the best student poster

**19:45** Guided visit to **Teatro Principal**

**21:00** Conference dinner (included in the registration fee). **Teatro Principal.**



**Teatro Principal Restaurant**  
Coso Street  
(close to Plaza España,  
España Square)



## Thursday & Friday September 6th-7th

### Field trip to the Basque Cantabrian basin (N Spain)

#### September 6th

**8:00 am** - Departure from campus San Francisco (**meeting point A**)

Accommodation for the night of September 6th is included in the registration fee (Hotel Aisia Orio), but bear in mind that you have to arrange your own accommodation in Zaragoza for the night of September 7th.

#### September 7th

**20:30** - Estimated arrival time into Zaragoza

#### Weather and clothes

An oceanic climate predominates in the Basque coast, with its wet weather all year round and moderate temperatures, averaging 19°C in summer, but it can hit the mid 30's°C. Therefore, expect almost anything and don't forget your raincoat nor your swimming costume.

## Local information

#### Transportation

Zaragoza is situated in the centre of the geo-economic rectangle made up of Madrid, Barcelona, Valencia and the Basque Country, all some 300 km away. In addition, Zaragoza is one of the main links in the rail network, and this is enhanced by the arrival of the AVE (High Speed Train) and Delicias Station as a passenger transport interchange.

#### Zaragoza airport

Zaragoza airport is located 10 km. from the city. Connections from the airport to the city are by bus, taxi and rental car.

Airport bus: [www.agredasa.com](http://www.agredasa.com)

Duration: 45 min. Price: 1.60 euro.

**Estación Zaragoza Delicias: Bus and Train station**  
([www.estacion-zaragoza.es](http://www.estacion-zaragoza.es))

The station is located at Avda. Navarra, 80. Various city buses ([www.tuzsa.es](http://www.tuzsa.es)) stop near the station. Routes with a stop in the station: **51, Ci1, Ci2** and **34**. Rout 51 takes you to the city centre and rout Ci2 (circular 2) takes you close to Colegio Mayor Pedro Cerbuna (budget accommodation) and Edificio Geológicas (IWAF9 venue) both located at the San Francisco Campus. Take the bus at the stop ESTACION DELICIAS SALIDAS (DELICIAS STATION DEPARTURES) and get off at stop: V. HUNGRIA/PABELLON.



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