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# SUPER SEDIMENTOLOGICAL EXPOSURES

## AN IDEAL GEOTOUR THROUGH SOME OF MOST THE SPECTACULAR TRIASSIC TO QUATERNARY OUTCROPS OF NORTH SARDINIA (CENTRAL MEDITERRANEAN, ITALY)

#### Introduction

Sardinia is one of the largest islands of the Mediterranean Sea (Fig. 1) and presents, in a relatively small area, an amazing variety of geology ranging from Palaeozoic to Quaternary. The Island is known worldwide for its record of the Variscan orogen, a collisional belt developed in Devonian-Carboniferous times. However, in its northern part spectacular outcrops are witness of its post-orogenic Mesozoic and Cenozoic history (Fig. 2). Most of these outcrops are modern cliffs surrounded by the Sardinian Sea (eastern part of the Balearic Basin) and they offer spectacular locations for both geology and tourism. The aim of this brief note is to provide an overview of some of the best outcrops in the northern part of Sardinia, giving

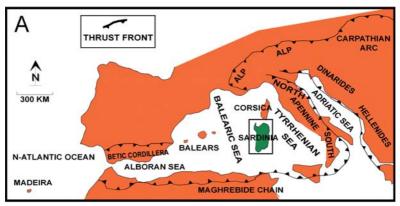
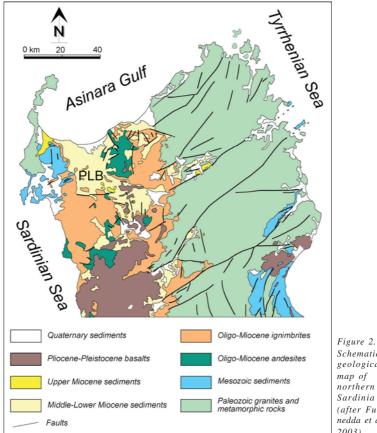


Figure 1. Location map of the study area and main geological features of the Mediterranean region. Sardinia is in green.





Schematic geological map of northern Sardinia (after Funedda et al., 2003).

details of how to reach them. Most of the selected stops are part of field trips that will be organized to accompany the IAS-2009 meeting to be held in Alghero.

## **Geological** setting

#### Mesozoic

The Variscan continental collision took place during the early Carboniferous and was followed by an extensional event related to the gravitational collapse of the

orogenic prism. An extensional regime continued during Mesozoic times, allowing a general subsidence that favoured the deposition of a complete Triassic transgressive continental to shallow-marine cycle followed by middle Jurassic to Cretaceous relatively deep-marine conditions (Carmignani et al., 2001; Barca & Cerchi, 2002).

#### Cenozoic

From the Triassic to the Paleocene, Sardinia and Corsica (the island to the north of Sardinia) were

part of the southern margin of Europe (Iberian Peninsula and southern France). During the Oligocene they separated from it from the European landmass due to the spreading of the Balearic Basin and, with anticlockwise rotation, in the late Miocene they moved to their present-day position in the Mediterranean Sea (Casula et al., 2001). Extension related to this spreading was responsible for the formation of several basins and those of Sardinia constitute the easternmost part of this system (Sardinian rift, Cherchi & Montadert, 1982). Syn-rift deposition continued up to the Tortonian when full post-rift conditions were established and widespread alkaline basaltic magmatism occurred (Funedda et al., 2003). From late Pliocene times onwards, Sardinia is considered to have been relatively stable (Ferranti et al., 2006). As a result of this tectonic stability, Sardinia has been used to document sea-level fluctuations and, therefore, climate change occurring over the last 200 kyr (Andreucci et al., 2006; Antonioli et al., 2007).

#### Geotour

This ideal geotour starts from the city of Alghero (Fig. 3) and goes toward the Triassic siliciclastic successions cropping out along the wonderful beaches of Torre del Porticciolo (Stop 1), moves to the Capo Caccia promontory of Cretaceous limestones (Stop 2), goes 50 km inland (close to the city of Sassari) to observe the spectacular Miocene syn-rift deposits (Stop 3), and finally ends with the Quaternary outcrops of the Alghero coast (Stop 4).

#### Stop 1 Triassic siliciclastic succession

From Alghero take road SS127bis, direction Fertilia-Capo Caccia (after 10 km, stop to take a look at the Nuraghe Palmavera ruins). After 18 km, at the crossroads, turn right, following the direction of Torre del Porticciolo. At the first intersection to the left, leave the main road and continue up to the end where you will find a car parking (Fig. 3). This place takes its name from the Spanish tower that dominates the small bay with its lovely sandy beach (Fig. 4). Take the path and go downhill toward the beach.

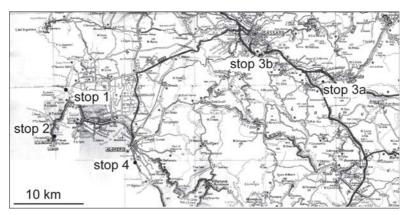


Figure 3. Road map of the proposed stops.





Figure 4. Panoramic view (from the car park) of the Triassic succession cropping out at Torre del Porticciolo. Note that below the tower there is a thick conglomerate layer.

The excellent outcrops surrounding the bay are Triassic strata of comparable facies to the German Buntersandstein. The succession consists of mediumgrained grey sandstones (up to 4 m thick) alternated with reddish silty to clayey (up to 7 m thick) beds (Figs 4 and 5). The sandstones show welldeveloped cross-beds (Fig. 6), planar lamination and climbing ripples. They have been interpreted as meander river deposits. The reddish beds are highly bioturbated and traces of roots and tree trunks may be observed. These latter have been



Figure 5. Panoramic view (from the tower) of the Triassic succession with the alternation of sandstone (whitish) and reddish silty-clay layers, cropping out at Torre del Porticciolo.

interpreted as alluvial plain deposits (Cassinis et al., 2002). Towards the top, the sandy succession is cut by an up to 8 m thick, normal-graded, matrix-supported conglomerate. Clasts are well-rounded, often imbricated and mainly composed of metamorphic quartz pebbles. Cutand-fill and trough cross-beds are the most common structures. This conglomerate has been interpreted as a braided stream deposit (Fig. 4; Cassinis et al., 2002; Fontana et al., 2003).



Figure 6. Cross beds in the Triassic sandstones. Pen is 12 cm long for scale.

#### <u>Stop 2 Cretaceous rudist-bearing</u> limestones

Take the road back to the intersection with the SS127bis. Go to the right, direction Capo Caccia. Along the road enjoy the wonderful views of Porto Conte Bay with its incredible variety of colours. After about 4 km, you reach the village of Tramariglio. Do not forget to take a lunch stop at Ristorante La Nuvola (on the right side of the road)!! Continuing on the road, after 3 km you will find an intersection to the right, leading to the panoramic viewpoint of Belvedere di Capo Caccia (Fig. 3). In front of you there lies the small island of La Foradada (perched island; Fig. 7) and to the left the beautiful promontory of Capo Caccia (Fig. 8). The surrounding rocks are Upper Jurassic and Cretaceous limestones. Those cropping out along the Capo Caccia promontory are referred to Upper Cretaceous (Cherchi et al., 2002).

The limestones display metrethick bedding (maximum 7 m thick) generally characterized by a vertical transition from bioclastic







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Figure 7. Panoramic view of the Jurassic-Cretaceous limestones cropping out at Belvedere di Capo Caccia. In the foreground lies La Foradada Island.

Figure 8. Panoramic view of Jurassic-Cretaceous limestones of Capo Caccia.

wackestones and packstones to grainstones (Carannante & Simone, 2002). Abundant mollusc (rudist) clusters are superimposed to form buildups that may reach up to 2 m in thickness (Fig. 9). These rudistrich limestones have been related to a shallow sea flooding a moderately deformed Jurassic-early Cretaceous platform that was dissected during a mid-Cretaceous tectonic event (Carannante & Simone, 2002).

Continuing on the road to Capo Caccia, you reach a car parking where, behind the rubbish bins, the rudist buildups are well exposed. From the car park, a 600-step pathway takes you to the Neptune Caves. These karstic caves can be visited all through the year ( $10 \oplus$ ). The Capo Caccia karst system is one of the best developed in Sardinia and has recently been the focus of palaeoclimate studies (Antonioili et al., 2007).

#### Stop 3 Miocene syn-rift deposits

Take the road SS127bis, and go back to the intersection with the Torre del Porticciolo road. Turn left, and continue along the road. direction Sassari. Along the road you cannot miss the lovely beach of Porto Ferro (intersection to the left, after 4 km) and Agriturismo Bonsai (to the left, after the Lago Baraz intersection) where you may enjoy the local food!! Continuing on the road towards Sassari, you pass Santa Maria La Palma village where you may buy local wine at the Cantina Sociale store. After 11 km, take the new 4-lane highway. When you reach Sassari, take the SS131, direction Cagliari, and drive for 15 km south. Exit at Florinas-Codrongianus. Turn to the left, direction Ploaghe, and continue for about 1.5 km until you reach a sand pit. Park by the side of the road and walk to the outcrop (Stop 3a of Fig. 3).



Figure 9. Rudist bivalves. Lens cap for scale is 5 cm.



Rocks cropping out belong to the Porto Torres-Logudoro Basin (PLB; Fig. 2). This basin developed as a half graben from the early Miocene. Three depositional sequences characterize the basin fill (Figs 2 and 10). Sequence 1 consists of continental, to deltaic and marine deposits, Burdigalian-Langhian in age, unconformable overlying Aquitanian volcanic strata. Sequence 2 (Serravalian-late Tortonian, probably early Messinian) is represented by deltaic to marine deposits onlapping onto Sequence 1. Sequence 3 (late Messinian-Pliocene) is characterized by continental and marine post-rift deposits resting unconformable on the older sequences. These sequences have been clearly identified on highresolution seismic profiles from the Asinara Gulf, the seaward continuation of the Porto Torres-Logudoro Basin (Fig. 2; Thomas & Gennesseaux 1986; Funedda et al., 2003).

## SSW

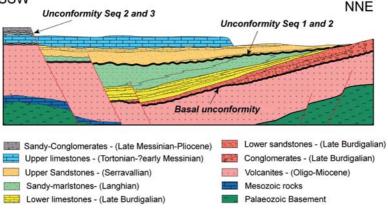


Figure 10. Schematic cross section (not to scale) of the Porto Torres-Logudoro Basin (after Funedda et al., 2003).

In the working face of the sand pit a well-preserved prograding sand body referred to the lower sandstone of Sequence 1 may be observed. Sands are medium- to coarse-grained, and are mainly composed of quartz and feldspar. Topset, foreset and bottomset beds may be followed at outcrop scale. This prograding body has been interpreted as a Gilbert-type delta (Fig. 11; Martini et al., 1992; Funedda et al., 2003).

Continuing along the road toward Ploaghe, you reach a major crossroads. Turn left, direction Sassari. After 2.5 km you will find the Abbey of St. Trinity of Saccargia, a wonderful example of Pisano-gothic style. Continuing on the same road, after 3.5 km turn to the right on the SS131, direction Sassari. A few kilometres before Sassari, in-between two tunnels, you may examine the Miocene carbonate facies (Sassari Channel) of the Porto Torres-Logudoro Basin (Stop 3b of Fig. 3; Fig. 12). This consists of coarse rhodolith-rich limestones alternated with calcareous clayey siltstones,



Figure 11. Gilbert-type delta (10 m thick) in the lower sandstones at Codrongianus.

carbonate-siliciclastic sands and marls. The complex fill architecture of the Sassari Channel developed as a consequence of multiple erosional/ depositional events as well as of large-scale fault-controlled gravitational collapses and the emplacement of megabreccia beds (Vigorito et al., 2006).

Continue on the SS131, direction Sassari. After the tunnels take a left towards Alghero (about 35 km). On the way back, you may stop at Sella & Mosca (5 km before Alghero) to

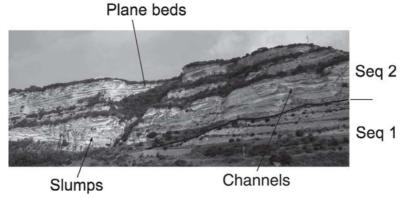


Figure 12. Panoramic view of the Sassari Channel. Note channels and slumps in the lower part and plane beds in the upper part.





Figure 13. Panoramic view of the «Cantaro» quarries. Key to symbols: Ps=reddish palaeosol; U = unconformity; E1= Eemian bioturbated and massive deposits; E2= aeolianites foresets (Würmian).

taste and purchase a selection of excellent local wines.

#### Stop 4 Quaternary deposits

From Alghero, take the road south towards Bosa. The road cuts through

late Quaternary deposits lapping onto different substrata (Triassic sandstones and dolostones, Cretaceous limestones and Oligocene lavas). In the Alghero area the



Figure 14. Detailed view of the «Cantaro» quarry. Note the intense bioturbation of the lower unit.

Quaternary succession has been subdivided into two unconformitybound units (Andreucci et al., 2006). The lower Unit 1 consists of sands and conglomerates yielding warmclimate marine fossils (i.e. Strombus bubonius and Patella ferruginea). It has been referred to the Eemian interglacial stage (OIS 5) and is interpreted to have been deposited during a relative sea-level rise, under warm and moist climate conditions (Andreucci et al., 2006). A welldeveloped unconformity separates Unit 1 from Unit 2. This is normally marked by the presence of a quasicontinuous reddish palaeosol (Ps in Fig. 13). Unit 2 is mainly composed of foreset sandstones referred to coastal dune deposits, and subordinate alluvial sandy conglomerates. The unit is assigned to OIS 4, and is interpreted to have developed during the sea-level fall that occurred at the beginning of the last glacial stage (Würmian; Fig. 13, Andreucci et al., 2006).

A kilometre after the end of Alghero, going toward Bosa, stop on the right-hand side of the road in one of the parking spaces. Take one of the numerous paths going down to the shore and walk southward. You will walk over marine (beach/shoreface) Eemian deposits. The reddish palaeosol separates marine deposits from sandy coastal dunes and alluvial strata. One of the best outcrops is located in an abandoned quarry close to the Cantaro Spring (there is a sign on the road). The quarry was the source of dimension stone used to build the city of Alghero (Fig. 14).

This outcrop displays sandy deposits characterized by bioturbated, highly cemented, structureless aeolian sand sheets (E1 in Fig. 13) and high-angle crossbedded dunes (E2 in Fig. 13). E1 and E2 are separated by an angular unconformity (U in Fig. 13) gently dipping seaward. E1 deposits are referred to the Eemian (age date of 100 ka), while E2 is Würmian (age date of 80 ka; Pascucci et al., 2007).



Figure 15. Panoramic view of the «Zio Peppino» quarry. Sandstone foresets are part of a barchan palaeodune system.



Continuing another kilometre south along the road, you reach a second quarry (Fig. 15) locally named «Zio Peppino». Inside the quarry it is possible to observe a spectacular 3D-view of a barchan dune (E2). E1 deposits are well developed only in the lowermost part of the quarry where the bones of terrestrial vertebrates (*Praemegaceros cazioti*) occur. The black hole in the central part of Fig.15 is the entrance to an abandoned copper mine.

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#### Erratum

In the April issue of the IAS Newsletter (nr. 216), both the name and address of the author of the article «Environmental Sedimentology» devoted to the International Year of Planet Earth appeared erroneously (partly) printed. The correct and complete author's reference is as follows: Dr. Gail M. Ashley, Department of Earth & Planetary Sciences, Rutgers University, New Brunswick, NJ 08901 USA. José-Pedro Calvo

IAS General Secretary



# Announcement

# 5<sup>th</sup> Latin American Congress of Sedimentology

The Latin American Congress of Sedimentology is an event that takes place every three years, and has the purpose of promoting integration among geoscientists interested in interchanging experiences on several disciplines related to Sedimentology and Stratigraphy of South America, including their application for hydrocarbon and other mineral exploration. The first congress of this nature took place in Margarita Island, Venezuela, in 1997, the second one in Mar del Plata, Argentina, in 2000, the third one in Belém, Brazil, in 2003, and the fourth one in Bariloche, Argentina, in 2006.

Among the AAPG in Caracas in 1996, the First Latin American Congress of Sedimentology in Margarita Island, in 1997 and the XI Latin-American Geochemical Organic Congress that will be held in Margarita Island, in November 2008, this Fifth Latin American Congress of Sedimentology will be one of the most important events of this kind that has been taken place in Venezuela. An event of this nature is particularly important to discuss issues of great international interest, as the sedimentology of petroleum reservoirs. The focus of the V Congress is petroleum exploration, which is particularly important in Venezuela, due to the importance of this country in the worldwide petroleum industry.

The Organizing Committee has included several activities in the programme in order to join professionals and students from several countries. The congress will run several conferences with outstanding lectures. Eleven technical sessions will discuss clastic sedimentation, carbonate rocks, diagenesis of siliciclastics, carbonates and evaporates; ichnology: applications in sedimentology and stratigraphy; influences in hydrocarbon reservoir, taphonomy

and paleontology, basin analysis, tectonics and sedimentation, sedimentology of source rocks and hydrocarbon reservoirs. geochemistry of sedimentary rocks, environments, sedimentary facies, seismic facies, seismic stratigraphy, and sequence stratigraphy, modern sedimentary environments. Short courses and workshops will be also offered for those who are interested in learning more about specific issues on sedimentology and stratigraphy. Workshops will offer discussions on interesting subjects including core samples of Venezuela hydrocarbon reservoirs and trace fossils.

Abstracts should be submitted to the congress address not later than October 31st, 2008. Options for abstract submission will be online, using the abstract submission form provided on the Congress web-site. More information about the congress, including registration fees and direction for abstract preparation, might be accessed later in the following web sites:

#### http://www.pdvsa.com

Any questions related to this congress should be addressed to: Rosa C. Aquino H. Edf. Guaraguao, Módulo A, PB, Ofc. 15 Edif. Sede PDVSA, Puerto La Cruz, Apdo 4326 Edo Anzóaegui, Venezuela Fax: (58)281-2603181 Phone: (58)281-2604208 E-mail: rosaaquino@canv.net aquinor@pdvsa.com



## Announcement

# FROM RIVER TO ROCK RECORD: The Preservation of Fluvial Sediments and Their Subsequent Interpretation

## Aberdeen, Scotland, UK, 12-14 January 2009

W e know that the rock record is a mosaic of remnants from the deposits of a river at any instant in time, but we still struggle to map from modern examples to that record, and river models fail to take into account the many modifications that occur as the sedimentary architecture is built up. We still do not have good answers to many of the basic questions and we suggest that published facies models (particularly the ones in textbooks) are grossly over-simplistic. We believe that this meeting is necessary because understanding fluvial systems is far from complete. For example, maximising hydrocarbon recovery from fluvial reservoirs still remains a daunting challenge for industry, in large part, we would argue, because understanding of the architecture of fluvial deposits is still poor.

In an attempt to advance understanding further, we are inviting together in one place lots of people who are working on this problem, and we hope to get a good discussion going. We want to bring together not only the academic researchers in geomorphology and sedimentology, but also those, from academia and industry, who are trying to apply this research to characterising the subsurface for management of natural resources. We hope this will stimulate all our thinking and activity, by helping each group to understand the needs and problems of the others. There should be immediate gain for attendees in having a wider appreciation of the subject, and we hope a longer term gain for all because future research should be better focussed.

An objective of this conference is to attract a broad spectrum of contributions, ranging from those thinking about the character of modern fluvial systems, right through to the «end-user» trying to make sense of the subsurface record.

To this end, keynotes have been chosen to sample the whole spectrum of research, from geomorphologists to subsurface modellers, and a wide range of spatial and temporal scales for river deposits, from studying movement of individual river bars at the annual, river-reach scale, to sequence stratigraphy of entire successions at the continentalmargin scale. Several leading researchers from academia and industry have agreed to be keynote speakers and we hope they will tempt others from their own subdiscipline to attend and contribute, to make a truly interdisciplinary and international meeting. Additionally, we intend to use the conference as a catalyst for producing a publication on this theme with the session themes providing the structure. We plan to have ideas and concepts papers re-evaluating dogma on fluvial architecture and some data-rich chapters on modern examples that will be of great assistance to those struggling to interpret the rock record.

The three day conference will be held at the University of Aberdeen, Scotland, and a nearby core store. We will? start this meeting with a one-day core workshop to stimulate thinking and discussion, followed then by two full days of oral and poster presentations and debate, arranged in a single plenary session (no parallel events). We welcome at the meeting not only those who wish to present material but also those who just want to listen in or ask questions.

The core workshop is aimed at helping familiarise researchers with the problems and end-goals of interpreting the subsurface, and might even result in challenges to existing interpretations of some of that core. We are aiming to have a selection of different examples of fluvial successions in core to form the basis for discussion on the problems of subsurface analysis of fluvial successions. Our intention is to focus the workshop around specific questions, such as: determination of sinuosity and sandbody style; estimating size of the river system and thus resultant sediment bodies: correct identification of in-channel, levee and floodplain genetic elements, separating channelised from unconfined alluvial units, and detecting aeolian units within fluvial successions; recognition and use of palaeosols, and distinguishing pedogenic from groundwater (diagenetic) carbonate concretions; palaeogeographic reconstruction, distinguishing alluvial units from lacustrine successions and marine (lagoonal?) incursions.

The two subsequent days of oral presentations and poster displays will be focussed on sessions discussing issues such as: an examination of the problems involved in transferring modern geomorphological knowledge to the sedimentary record, or «what not to do!»: what is preserved in the rock record, and implications for reconstructing fluvial architecture?; what lessons can we learn from modern processes - how do we work back to the rock record?; complicated fluvial architecture with a consideration of the autogenic and allogenic controls, and the influence of medium-term processes on fluvial sedimentary architecture; sequence stratigraphy and the interaction between fluvial and non marine sequences, and the influence of longterm processes on fluvial



sedimentary architecture; the interaction of sediment and water in affecting incision or aggradation, and the influence of short-term processes on fluvial sedimentary architecture; modelling river deposits and the petrophysical implications; and the problems involved in interpreting fluvial reservoirs.

We want to encourage young researchers to contribute and will be offering some financial support for student attendees (see website for details). On-line registration for the conference and core workshop is now open and we are accepting abstracts until 30<sup>th</sup> September 2008. Those who cannot attend but would like to contribute to the post-conference publication are welcome to contact us.

Stephanie Davidson, Sophie Leleu and Colin North University of Aberdeen E-mail: rivertorock@abdn.ac.uk Website: http://www.abdn.ac.uk/ geology/deptinfo/events/river2rock/ river2rock.php

# IAS Postgraduate Grant Scheme

IAS has established a grant scheme designed to help PhD students with their studies. We are offering to support postgraduates in their fieldwork, data acquisition and analysis, visits to other institutes to use specialised facilities, or participation in field excursions directly related to the PhD research subject.

Up to 10 grants, each of about € 1000 are awarded twice a year. These grants are available for IAS members only, and only for PhD students. Students enrolled in MSc programs are NOT eligible for grants. Research grants are NOT given for travel to attend a scientific conference, NOR for acquisition of equipment. Student travel grants for conferences can be usually obtained directly from organizers of the meeting.

The **Grant Scheme Guidelines** provide a summary of required information needed for successful a Grant Application. Applications are evaluated on the basis of the scientific merits of the problems, the capability of the researcher, and reasonableness of the budget.

Supervisor's Letter Guidelines list the information needed.

## **IAS Grant Scheme Guidelines**

The application should be concise and informative and contains the following information (limit your application to 4 pages): Research proposal - 2 pages maximum Bibliography - ½ page Budget - ½ page Curriculum Vitae - 1 page

Recommendation letter (or email) from the supervisor supporting the applicant is mandatory and the research proposal must be sent directly to the Treasurer of IAS by the application deadline

# Guidelines for letter from supervisor

The letter from the supervisor should provide an evaluation of the capability of the student to carry out the proposed research, the significance and necessity of the research, and reasonableness of the budget request. The letter must be sent directly to the Treasurer of IAS by post or e-mail by the application deadline (Patric Jacobs, Department of Geology and Soil Science, Ghent University, Krijgslaan 281/S8, B-9000 Gent, BELGIUM. E-mail: patric.jacobs@ugent.be). An application form is on our website (http://www.iasnet.org).

#### **Grant application**

Research Proposal -

• Title

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• **Introduction:** Introduce the topic and provide



relevant background information; summarise previous work by you or others. Provide the context for your proposed study in terms of geography, geology, and /or scientific discipline.

- Motivation: It should have a clearly written hypothesis or a wellexplained research problem of geologic significance. It should explain why it is important. Simply collecting data without an objective is not considered wise use of resources.
- Methods: Outline the research strategy (methods) that you plan to use to solve the problem in the field and/ or in the laboratory. Please include information on data collection, data analyses, and data interpretation.
- Facilities: Briefly list research and study facilities available to you,

such as field and laboratory equipment, computers, library.

- Bibliography: provide a list of key (5-10) publications that are relevant to your proposed research. The list should show that you have done adequate background research on your project and are assured that your methodology is solid and that the project has not been done already.
- Budget: Provide a brief summary of the total cost of the research. Clearly indicate the amount (in euros) being requested. State specifically what the IAS grant funds will be used for.
- Curriculum Vitae: Name, postal address, email address, university education (degrees & dates), work experience, awards and scholarships, independent research projects, your abstracts and publications.

Application deadlines:		March 31 September 30
Recipient notification:	1 <sup>st</sup> session: <b>2<sup>nd</sup> session:</b>	before June 30 before December 31

# LIST OF STUDENT MEMBERS WHO GOT GRANTS IN THE PAST SESSION Name Institution Financial support

<b>Cassle,</b> Christopher	Colorado State Univ., Fort Collins, USA	1,000€
<b>Crne</b> , Alenka Eva	I. Rakovec Inst. Pal., Ljubljana, Slovenia	1,000€
<b>Eros,</b> James Michael	Univ. California-Davis, California, USA	1,000€
<b>Foreman</b> , Brady	University of Wyoming, USA	1,000€
<b>Glunk,</b> Christina	University of Neuchatel, Switzerland	1,000€
<b>Haberlah</b> , David	University of Adelaide, Australia	1,000 €
<b>Martindale</b> , Rowan	Univ. of Southern California, L.A., USA	1,000€
<b>Ricci</b> , Christiano	Univ. G. D'Annunzio, Chieti, Italy	1,000 €
<b>Roche</b> , Ronan	Manchester Metropolitan Univ., UK	1,000 €
Rodríguez Brizuela,	Rafael Museo Argentino C. N., Córdoba, Argentina	1,000€
<b>Santello</b> , Lisa	University of Padova, Italy	1,000 €
<b>Thomas,</b> Stephanie	Southern Methodist Univ., Dallas, USA	1,000€



# CALENDAR



## 26TH MEETING OF SEDIMENTOLOGY \*

1-3 September, 2008 Bochum, Germany Dr. Adrian Immenhauser Ruhr-University Bochum Faculty of Earth Sciences Institute for Geology, Mineralogy and Geophysics Universitätsstrasse 150 D-44801 Bochum/Germany E-mail: adrian.immenhauser@rub.de Website: http://www.ruhr-uni-bochum.de/sediment/

# THE SECOND INTERNATIONAL CONGRESS ON ICHNOLOGY ICHNIA 2008

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1 – 5 September, 2008 Cracow, Poland Prof. Alfred Uchman Institute Nauk Geologicznych Jagiellonian University Cracow, Poland Tel. +48 126336377 E-mail: alfred.uchman@uj.edu.pl Web-page: http://www.uj.edu.pl/ING/ichnia08/index.html

## POKOS'3 - POLISH SEDIMENTOLOGICAL CONFERENCE REGIONAL CONTEXT OF SEDIMENTARY ENVIRONMENTS AND PROCESSES

17-19 September, 2008 Kudowa Zdrój, Sudetes, Poland Dr. Jurand Wojewoda Institute of Geological Sciences, University of Wroclaw E-mail: %20pokos3@ing.uni.wroc.pl Web-page: http:// www.pokos.img.uni.wroc.pl/

## GEOSED 2008 CONGRESS

23-24 September, 2008 Bari, Italy Prof. Luisa Sabato E-mail: L.sabato@geo.uniba.it Website: http://www.geosed.it/index.php

## HAQ COURSE 2008 Sequence Stratigraphy: from source to sink

28 September – 2 October, 2008 Matera, Italy Dr. Marcello Tropeano E-mail: m.tropeano@geo.uniba.it Website: http://www.geosed.it/index.php

## XIII LATINAMERICAN CONGRESS OF GEOLOGY & XIV PERUVIAN CONGRESS OF GEOLOGY \*

29 September -3 October, 2008 Lima, Perú Contact: José Arce (President of the Organizing Committee) E-mail josearce@geofisicos.com.pe José Daudt (Sedimentology/Stratigraphy/Hydrocarbon Geology) E-mail jose.daudt@petrobras.com Website (under construction) http:// www.congresosgp.com/ Website Sociedad Geológica del Perú http://sgp.org.pe/



### 5<sup>™</sup> INTERNATIONAL CONFERENCE ON DELTA's

26 October – 2 November, 2008 Shanghai – Qingdao, China Yoshiki Saito E-mail: yoshiki.saito@aist.go.jp Website: http://unit.aist.go.jp/igg/rg/ cug-rg/ADP.html

### FROM RIVER TO ROCK RECORD: THE PRESERVATION OF FLUVIAL SEDIMENTS AND THEIRS UBSEQUENT INTERPRETATION

12-14 January, 2009 Aberdeen, Scotland, UK Stephanie Davidson, Sophie Leleu and Colin North University of Aberdeen, UK rivertorock@abdn.ac.uk Website: www.abdn.ac.uk/geology/deptinfo/ river2rock/river2rock.php

## 5<sup>™</sup> LATIN AMERICAN SEDIMENTOLOGICAL CONGRESS

15-20 March, 2009 Puerto La Cruz, Venezuela Dr. Rosa Aquino E-mail: aquinor@pdvsa.com; rosaaquino@cantv.net

## IAVCEI – IAS Third International Maar Conference \*

14-17 April, 2009 Malargue, Argentina Dr. Corina Risso Universidad de Buenos Aires, Argentina E-mail: corinarisso@fibertel.com.ar Website: www.3imc.org

## 27TH IAS MEETING OF SEDIMENTOLOGY \*

20-23 September, 2009 Alghero, Sardinia, Italy

Dr. Vincenzo Pascucci and Dr. Stefano Andreucci Università di Sassari, Sardinia, Italy pascucci@unisi.it; sandreucci@uniss.it Website: www.ias2009.com



# 18<sup>™</sup> INTERNATIONAL SEDIMENTOLOGICAL CONGRESS\*

26 September, 1 October, 2010 Mendoza, Argentina Eduardo Piovano GIGES Dpto. Química, Facultad de Ciencias Avda. Velez Sarsfield 1611 X501GCA, Córdoba, Argentina E-mail: epiovano@efn.uncor.edu

\* THESE EVENTS HAVE FULL OR PARTIAL IAS SPONSORSHIP





## IAS-Homepage: http://www.iasnet.org

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