

IAS

INTERNATIONAL ASSOCIATION OF SEDIMENTOLOGISTS

Newsletter

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Contents

- | | |
|----|---|
| 3 | 25 th IAS Meeting of Sedimentology |
| 8 | 4 th International Summer School
of Sedimentology |
| 11 | Sedimentology in Croatia |
| 14 | IAS Postgraduate Grant Scheme |
| 16 | Calendar |

REPORT

25th IAS Meeting of Sedimentology

Patras, Greece, 4-7 September, 2007

The 25th Meeting of the International Association of Sedimentologists was held at the Conference and cultural center of the University of Patras, Greece, on 4 -7 September 2007. It was the first IAS Meeting organized in Greece. Patras is the third university town in the country (more than 200,000 people), located in western Greece, 200 km far from Athens.

The organizing committee has been composed by Avraam Zelilidis (Chairman), Fotini Pomoni-Papaioannou (Secretary), George Papatheodorou and Maria Geraga (Scientific Program Coordinators), Nikolaos Kontopoulos and Avraam Zelilidis (Field Trip Coordinators), George Ferentinos (Social Program), Pavlos Avramidis (Hotel Coordinator), Panagiotis Stefanopoulos (Web-site



Figure 1. Part of the Organizing Committee of the 25th Meeting of Sedimentology together with some Croatian and Italian sedimentologists attending the conference (photo provided by Avraam Zelilidis).

coordinator) and Angeliki Baka (Secretarial Support).

The organizing Committee received a strong support by Synedra and by 30 students from Department of Geology.

There were 301 inscriptions from 40 different countries embracing four continents.

During the three days of meeting 276 communications were presented including a total of 150 oral presentations and 126 posters, distributed among the following themes:

- T1 Environmental sedimentology
- T2 Non-marine systems and environments
- T3 Sedimentary dynamics of carbonate platforms
- T4 Deep-sea depositional systems and environments
- T5 Biotic and taphonomic processes in sedimentation
- T6 Palaeo-weathering and diagenesis
- T7 Climatic signatures in sediments
- T8 Sedimentation and Tectonics
- T9 Cycles and events in sedimentation
- T10 Basin modeling: energy and water resources
- T11 Recent developments in sedimentary methods
- T12 Heritage and communication in sedimentary knowledge
- T13 Carbonate depositional systems - carbonate factories
- T14 The sedimentary record as an archive of global change
- T15 High-resolution geochemistry and diagenesis of carbonate materials
- T16 Diagenesis and geochemistry of siliciclastic systems
- T17 Advances and controversies in cyclo- and sequence stratigraphy
- T18 Dynamics of coastal depositional environments - modern and ancient

ALBANIA	2	JORDAN	1
ARGENTINA	2	KOREA	10
AUSTRIA	1	LATVIA	2
BANGLADESH	1	NORWAY	11
BELGIUM	6	POLAND	6
BRAZIL	11	PORTUGAL	4
CAMEROON	1	ROMANIA	6
CANADA	5	RUSSIA	4
CHINA	3	SAUDI ARABIA	2
CROATIA	9	SLOVAKIA	2
CZECH REPUBLIC	2	SPAIN	22
EGYPT	1	SUDAN	2
FRANCE	23	SWITZERLAND	7
GERMANY	26	TAIWAN	1
GREECE	52	THE NETHERLANDS	3
HUNGARY	6	TUNISIA	3
INDIA	2	TURKEY	2
IRAN	1	UNITED ARAB EMIRATES	2
IRELAND	2	UNITED KINGDOM	10
ITALY	39	USA	6



Figure 2. View of the northern side of the Gialova lagoon, located in the SW Peloponnese region (Field-trip P5) (photo provided by Avraam Zelilidis).

Figure 3. Spectacular outcrop of well-bedded Eocene limestone and marlstone showing intercalated scar and slump structures; road from Ioannina to east Zagoria, Vikos area, northern Greece (Field-trip P3) (photo provided by Pedro Ruíz-Ortiz).



- T19 The sedimentological record of geohazards
- T20 Microbial, bio-induced and organo-metallic sediments
- T21 Gas in sedimentary rocks

Oral presentations were organized into four parallel halls, whereas posters fitted alphabetically in a special hall were displayed during the whole meeting. A special poster session was scheduled in the afternoon of the second day of the conference.

There were 4 pre-meeting field-trips and 3 post-meeting field-trips, with a total participation of 84 persons and 14 leading people.

The scientific information presented was organized in two edited books: 1. Abstract book (319p.) 2. Field-trip guidebook (190p.)

The following keynote addresses were given at the meeting:

Environmental sedimentology: The key to a sustainable planet earth, by **Gail Ashley** (Department of Geological Sciences, Rutgers University, USA)

Arc tectonics and volcano-sedimentary processes, by **Cathy Busby** (Department of earth science, University of California, USA)

Methane seeps and mud volcanoes: gas origin, fractionation and global emission to the



Figure 4. Vikos Canyon, northern Greece; an about 1,000 m-thick succession of Cretaceous to Palaeogene limestone beds forms the walls of the canyon (Field-trip P3) (photo provided by Pedro Ruiz-Ortiz).

Figure 5. Picture of the delegates attending the 25th Meeting of Sedimentology at the main door of the Conference Centre of the University of Patras (photo provided by Avraam Zelilidis).



atmosphere, by **Giuseppe Etiope** (INGV, Istituto Nazionale di Geofisica e Vulcanologia, Italy).

High-resolution geochemistry and diagenesis studies in carbonate research, by **Adrian**

Immenhauser (Ruhr-University Bochum, Institute for Geology, Germany)

Fluvial sedimentation and base level in endorheic basins, by **Gary Nichols** (Department of Geology, Royal Holloway University of London, UK)

How detrital geochemistry and mineralogy influence diagenesis: A case study from the Scotian basin (Cretaceous, Eastern Canada), by **Georgia Pe-Piper** (Department of

Geology, Saint Mary's University, Halifax, Canada)

Foramol (temperate-type) vs chlorozoan (tropical-type) carbonate platforms: depositional dynamics and architecture of the related depositional systems, by **Lucia Simone** (Dept. Scienze della Terra, Università di Napoli «Frederico II», Italy)

Two special Themes included two topics:

The Geoarchaeological approach to reconstruct former landscapes-case studies from the Eastern Mediterranean, by **Helmut Bruckner** (Faculty of Geography, University of Marburg, Germany).

Turbidity current initiation and its role in the variability of turbidite systems, by **David Piper** (Geological Survey of Canada, Bedford Institute of Oceanography, Dartmouth, Canada).

During the meeting a special event to distinguish the career of David Piper at the Geological Survey of Canada and at Dalhousie University and his contributions to the development of clastic sedimentation studies in Greece, took place. For this special session there was a special lecture by Nikolaos Kontopoulos reflecting David Piper's work and influence.

The Social Program offered an Icebreaker party at the evening before the start of the conference. During the party, there was a nice music and dance performance by the Ethnographic Group of University of Patras. The Gala Dinner was organized in the Ifigenia tavern, located in a neighboring hill. In both

events participants tasted typical Greece food and wine.

The meeting was supported by IAS and the Department of Geology of the University of Patras (Greece). It was sponsored by GSRT (General Secretariat for Research and Technology), ELPE (Hellenic Petroleum Co), TITAN Cement Company, IGME (Institute of Geology and Mineral Exploration), Region of West Greece, Ministry of National Education & Religious Affairs.

Finally, we would like to inform all participants that they can find photographs from the meeting in our web-site, and moreover we ask from participants to send us photographs from other activities during the meeting in order to add them also to our web-site.

*Avraam Zelilidis
Chairman of the 25th Meeting of
Sedimentology*



REPORT

IAS International Summer School of Sedimentology 2007

This year central Italy played host to the second IAS International Summer School of Sedimentology for PhD students. Twenty-Eight students from 14 countries attended the school. This was a fantastic opportunity to learn more about the subject of carbonate sedimentology and to explore some outstanding outcrops of Mesozoic rifted to passive margin stratigraphy that form the enthralling vistas of the Sabina and Umbria-Marche Apennines, in particular the famous pelagic carbonate platforms (PCPs).

The course was comprised of lectures and three field days. It provided the students with both the necessary knowledge to understand the surrounding geology and an insight into the enormous and exciting range of possibilities offered by carbonate research.

The first lectures were presented by Dan Bosence (Professor Emeritus at Royal Holloway University of London), regarding a variety of topics on carbonate sedimentology with the aim to reintroduce many of the students to the subject and to

demonstrate some of the new developments in the study of carbonates. This included his tectonic and basinal setting classification of carbonate platforms.

The principal organiser of the event, Massimo Santantonio (University of Rome) explained the fascinating research into the PCPs of Italy over the last 20 years. He showed that extensive geological mapping coupled with ammonite and microfossil biostratigraphical techniques could be used to identify and understand the complex stratigraphic and structural relationships found in the field. This was complemented by a set of talks provided by Alfredo Frixia (ENI E & P, Italy), who showed how the regional geology of Italy is evaluated from an industry perspective. He demonstrated how the local structure and stratigraphy can be viewed as petroleum system elements and why particular structures, geological formations and stratigraphic relationships behave as reservoirs, sources, seals and traps.



Figure 1. Photograph of an ammonite within the condensed section on a PCP top, taken on the first field day at Sabina.

Jeroen Kenter (Chevron Energy Technology Co.) provided a course on sequence stratigraphy. He also showed some of the dynamic new technical approaches currently being applied to document and understand carbonate platforms in both the field and geological record as a whole.

Finally, ETH Zürich was represented by Helmut Weissert and ex-IAS President Judy McKenzie. Helmut Weissert assessed the impact of the opening of the Atlantic and Tethys oceans on global paleoclimate and paleoceanography. Judy McKenzie presented a very interesting and comprehensive series of lectures covering over 200 years of dolomite research.

Great emphasis was placed on the student presentations that took place daily after dinner. These were attention grabbing and incredibly varied in scope. Moreover, for some of the students this was their first presentation in English! The research projects covered many fields of sedimentology from fieldwork with biostratigraphy to geochemical analysis to structural geology, and topics that ranged throughout the Phanerozoic.

Particularly memorable talks included research into the Triassic carbonates of the Sambosan AC, Japan by Jerome Chablais (University of Geneva) and a subsurface analysis of Cretaceous chalk from the North Sea based on core, petrophysical data and seismic



Figure 2. Massimo demonstrating on the final field day. Here he is showing the students part of a PCP escarpment facies.



Figure 3. Group photo of all student participants and Massimo Santantonio taken at the famous K/T boundary within the Botticione Section.

interpretation by Janus Christiansen and Kresten Anderskov (University of Copenhagen). In addition to the carbonate based talks, there were some very interesting presentations on other aspects of geology including a study of siliciclastic turbidites from the Ainsa Basin, Spain by Kanchan Das Gupta (University College London).

The first of the field days at Sabina involved a field mapping exercise designed to show the students how to read the complex field relationships present on the condensed tops and escarpments of PCPs. By tracing the post drowning pelagic Maeolica Formation, the condensed section and escarpment facies, it was possible to identify stratigraphic onlap and reconstruct the depositional history of the PCP.

The second day in the field, also in the Sabina area, involved walking a transect through the beautiful Italian countryside to see a number of PCPs in outcrop including the pinnacle or cusp type, created by two intersecting normal faults. Even though the fieldwork had to end early due to appalling weather conditions, the day did provide the students with an understanding of the

scale of and importance of the PCPs for unravelling the geological history of central Italy.

The final field day was set near Cantiano and included a visit to the famous Botticione section that holds the K/T and Cenomanian - Turonian boundaries. Evidence was put forward to suggest both that the Mesozoic extension and Cenozoic compression in the region relate to thin skin tectonics, where Triassic salt was utilised as a décollement. This provided a tectonic mechanism to explain the development of the PCPs and the complex field relationships seen today.

The combination of technical expertise and quality outcrops together with a friendly atmosphere made of the second IAS Summer School an invaluable experience. The event provided world class training in carbonate sedimentology and the opportunity to meet PhD students from all over the world. This was a really rewarding experience which I recommend to anyone who may wish to attend the next session in 2008.

*James Gardner
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REPORT

Sedimentology in Croatia

Croatia is a small but very interesting country for sedimentologists because of a variety of sedimentary rocks covering a time span of more than 300 My. The country can be divided into two parts: the northern part, built predominantly of Neogene and Quaternary clastic deposits reaching up to several thousand metres in thickness, and the southern one, composed mainly of an up to 10 km-thick sequence of shallow-marine Carboniferous to Palaeogene carbonate rocks. Therefore, both clastic and carbonate sedimentologists have a lot of work to do in Croatia.

Croatian sedimentologists are grouped in the Sedimentological Section of the Croatian Geological Society. Membership fluctuates as the Sedimentological Section is not formally organized. Nowadays the Section joins thirty Croatian sedimentologists, about half of them belonging to IAS, that come mainly from the University of Zagreb (Faculty of Mining, Geology and Petroleum Engineering and Faculty of Sciences), the Croatian Geological

Survey, and the INA – national oil company. Current head of the Section is Mladen Jurašić (University of Zagreb, Faculty of Sciences).

One of the biggest achievements of the section was the very successful organization of the 4th IAS Regional Meeting of Sedimentology back in 1983, which seriously raised interest for Sedimentology in Croatia. Twenty years later we decided to organize the 22nd IAS Meeting of Sedimentology, held in Opatija in 2003. This was a great opportunity to meeting a lot of our friends from many different countries, discuss in the field (Figure 1) and, of course, eat (a little) typical Croatian food and drink (a little more) typical Croatian wines... This event definitely triggered a renewed interest for Sedimentology to the Croatian geological community, such as it has been evidenced by an increase of Croatian sedimentologists in IAS membership and their participation in further IAS conferences, and in a higher importance of the Sedimentological Section of the Croatian Geological Society.



Figure 1. Karate technique applied against hummocky cross-stratified Cenomanian beds – 22nd IAS Meeting of Sedimentology Field trip to Istria (September 2003).

Other important activity has been the organization of workshops for Croatian sedimentologists, especially graduate students. Besides hosting highly acknowledged scientists running IAS Lecture Tours, like Harold Reading in 1999 or Charlotte Schreiber just a couple of weeks ago (Figure 2), members of the section have organized visits and lectures by other excellent geoscientists. This is the case for the lectures and workshops on ichnofossils and their usage in facies analysis and sequence stratigraphy given by Stephen T. Hasiotis (University of Kansas, USA; Figure 3) in 2005 and 2007, the lectures and workshop on Ice-age Earth by Manfred Frechen (Leibniz Institute for Applied Geosciences, Germany), the lecture on evolution of the marine ecosystem by Steven J. Hageman (Appalachian State University, USA), and the workshop and field trip on carbonate reservoir characterization led by Paul V. Wright (Cardiff University, UK) in 2006.

Members of the Sedimentological Section of the Croatian Geological Society have contributed to organize

several main conferences, including a very important part of these events: high-quality field trips. Besides the aforementioned IAS meetings, we have participated in the organization of three Croatian Geological Congresses with an international dimension (Opatija 1995 and 2005, Cavtat–Dubrovnik 2000), in the PANCARDI Meeting (Dubrovnik 2000), the 7th International Congress on Rudists (Rovinj 2002), the 7th Workshop on Alpine Geological Studies (Opatija 2005), the 3rd Mid-European Clay Conference (Opatija, 2006), the Adria 2006 Conference (Urbino, Italy & Zadar, Croatia), and the 9th International Symposium on Fossil Algae (Zagreb 2007). Today, Croatian sedimentologists are involved in many scientific projects funded by the Croatian Ministry of Science, Education and Sports and the Croatian National Science Foundation, as well as in some commercial projects. The major problem, serious deficiency in accessibility to the state-of-the-art analytical methods, necessary for today's science, is very painful for

Figure 2. Prof. Charlotte Schreiber discussing secrets of Upper Permian evaporites with participants of the field trip following her IAS Lecture Tour talks (October 2007).



Figure 3. Stephen Hasiotis drawing trace fossils on the upper bedding surface with beautifully preserved Nereites ichnofacies in the Upper Eocene Benkovac Stone Fm.

us, but there is also a good side of it: this fostered international cooperation, representing a very good opportunity to meet other people and learn and apply new methods in ever-changing world of science.

In order to provide more support, especially for younger researchers, we are discussing the opportunity to organize effective 2-day scientific meetings every year where new ideas could be discussed. These meetings should definitely include field trips to nice and well-studied outcrops – all of us should definitely spend more

time where everything is recorded: in the field, not only for our science, but also for our well-being!

*Igor Vlahovic
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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 e-mail) 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**
- ♦ **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 well-explained 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, e-mail address, university education (degrees & dates), work experience, awards and scholarships, independent research projects, your abstracts and publications.

Application deadlines: 1st session: **March 31**
2nd session: September 30

Recipient notification: 1st session: **before June 30**
2nd session: before December 31



CALENDAR

16th MEETING OF SWISS SEDIMENTOLOGISTS

23 February, 2008
Fribourg,
Switzerland

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26th MEETING OF SEDIMENTOLOGY *

1-3 September, 2008
Bochum, Germany

Dr. Adrian Immenhauser
Ruhr-University Bochum
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THE SECOND INTERNATIONAL CONGRESS ON ICHNOLOGY
ICHNIA 2008

1 – 5 September, 2008
Cracow, Poland

Prof. Alfred Uchman
Institute Nauk Geologicznych
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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 Wrocław
E-mail: %20pokos3@ing.uni.wroc.pl
Web-page: <http://www.pokos.img.uni.wroc.pl/>

XIII LATINAMERICAN CONGRESS OF GEOLOGY & XIV PERUVIAN CONGRESS OF
GEOLOGY

29 September -
3 October, 2008
Lima, Perú

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Website Sociedad Geológica del Perú <http://sgp.org.pe/>



**18TH INTERNATIONAL
SEDIMENTOLOGICAL CONGRESS ***

26 September
1 October, 2010
Mendoza,
Argentina

Eduardo Piovano
GIGES

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