

INTERNATIONAL ASSOCIATION OF
SEDIMENTOLOGISTS (IAS)



**29th IAS MEETING OF
SEDIMENTOLOGY**

www.sedimentologists.org/ims-2012

Second Circular

Sedimentology in the Heart of the Alps

Call for Abstracts

Schladming-Dachstein | Schladming/Austria
10th - 13th September 2012

Organized by

Montanuniversitaet Leoben, Austria

Department of Applied Geosciences and Geophysics

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Congress-Schladming

Sporthotel Royer ****Superior

Schladming-Rohrmoos | Schladming-Dachstein Tourist Office



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INVITATION

The International Association of Sedimentologists (www.sedimentologists.org) and the Department of Applied Geosciences and Geophysics, Montanuniversitaet Leoben (Austria) (www.unileoben.ac.at) invite you to the 29th IAS Meeting of Sedimentology, to be held in

Schladming/Austria, on 10th - 13th September 2012 **www.sedimentologists.org/ims-2012**

The 29th IAS Meeting of Sedimentology will bring together all facets of sedimentology under the theme *Sedimentology in the Heart of the Alps*. It will feature a broad interdisciplinary Scientific Programme, an exciting range of Pre- and Post-Meeting Field Trips, which are being organized with important contributions from our Austrian partners and input from our Slovenian, Croatian, Hungarian and Slovakian neighbours. Expert training Pre- and Post-Meeting Short Courses, an Exhibition and Leisure Options will be other features.

One of the most attractive points of the 29th IAS Meeting of Sedimentology will be the possibility to join several geological field trips. The region surrounding Schladming encloses a wide spectrum of sedimentary rocks, superbly exposed in the outcrops of the Eastern Alps. For example, the Northern Calcareous Alps are the type area for numerous classical Mesozoic sites including Global boundary Stratotype Section and Points (GSSPs). Also, there will be a variety of trips that examine famous outcrops of Palaeozoic and Cenozoic sedimentary rocks in the Eastern Alps, and sedimentary ore deposits. Other field trips will be held in the mountain chains of the Southern Alps, the Carpathians, the Dinarides and the Pannonian Basin.

VENUE

Congress-Schladming

In the context of the FIS Alpine Ski World Championship 2013 the new Media Centre is currently built in Schladming. The energetic concept which is defined by several ecological benefits represents the Austrian know-how towards environmental and present climate issues. Wood and local products strongly influence the interior design and create a special atmosphere which is affected by the surprising view on the attractive landscape. The Congress-Schladming will have 7 convention rooms with capacities from 30 up to 1400 persons. The impressive panorama as well as the inviting construction with its open architecture, equipped with the best available technology guaranties a great experience in the Congress-Schladming. For the participants coming by car free parking at Congress-Schladming is included. For all information about the facilities, infrastructure and services visit the website: www.congress-schladming.com.

The Kulinarwerk is caterer and home partner of Congress-Schladming: www.kulinarwerk.at

Sporthotel Royer **Superior**

Art as a synonym for creativity, inspiration, style and enjoyment is part of the hotel philosophy. The Royer is a world of its own with its service leaving nothing to be desired and its unequalled charm. Regardless whether in cuisine, service, seminar or leisure opportunities the Royer is renowned for its professionalism, friendliness and variety. Modern conference technologies leave nothing to chance; part of the Meeting activities will be in these facilities. Congress-Schladming is only two minutes walk away.

For more information visit the website: www.royer.at

DESTINATION

Between the magnificent southern walls of the Dachstein Massif and the scenic alpine summits of the Schladming Tauern you will find an idyllic landscape, colourful forests, golden light and countless mountain peaks seemingly close enough to touch - many visitors describe the autumn as the most beautiful time of the year in the Alps. We invite you to be our guests: for an epic journey or leisurely hikes surrounded by glorious scenery, vibrant activities or relaxation for renewed strengths, enjoyable visits to country inns and alpine huts, to enjoy evocative encounters with the nature and culture of the Schladming-Dachstein region. Warmth and hospitality are deeply rooted in our local culture.

More information can be found on the websites: www.schladming.at | www.schladming-dachstein.com

The **Schladming | Schladming-Dachstein region** is known as a popular, pulsating ski hub in winter, in summer the region transforms itself into one of the premier vacation and hiking destinations in entire Austria. It is situated in the heart of the Eastern Alps: 300 km from Vienna, 220 km from Munich, 90 km from Salzburg in the northwest and 180 km from Graz in the southeast. The Google Map on the Schladming-Dachstein website gives an overview: www.schladming-dachstein.com/en/aktuell/events/detail.htm?id=4642-10.09.2012-00:00-13.09.2012-00:00-0-1340748060-1349042340

Schladming can be reached easily by train from the nearby airports: Munich, Vienna, Salzburg, Linz, Klagenfurt, Graz or Innsbruck. Regular connections to international express trains ('INTERCITY') exist (www.oebb.at). Public bus service is available in all towns of the Schladming-Dachstein region. Schladming can be approached by car on the main road B 320 continuing from the highway A 10 (north-south direction: Germany - Salzburg - Villach - Italy/Slovenia) or from the A 9 (north-south direction: Germany - Passau - Linz - Graz - Slovenia).

The conference venue is near to the centre of Schladming. Here you may find all what you need besides the 29th IAS Meeting: a great deal of entertainment, culture, sporting facilities, shopping and gastronomy fulfil your every desire. Car parking space is directly in front of Congress-Schladming and Sporthotel Royer as well as on further public parking lots. For more information you will get a detailed city map.

Climate: This region has pleasant and mild climate in the autumn. Occasionally the weather becomes cool and windy. Note that the northern side of the Eastern Alps can have up to 2500 mm precipitation/year. Because the weather in the autumn can be unpredictable it is a good idea to bring clothing that can be layered.

ACCOMMODATION

29th IAS Meeting of Sedimentology participants will be offered a wide range of accommodation options, most of them in walking distance to the venue. Schladming and the Schladming-Dachstein region offer a diverse range of stylish hotels, comfortable vacation apartments, guesthouses, bed and breakfast guest beds, camping or for an exceptionally authentic experience a farm holiday.

For details: www.schladming.at | www.schladming-dachstein.com | www.ramsau.com

Several have been reserved for this Meeting and will be offered at special rates. Prices for suitable accommodations start at 25 EURO/night. Schladming-Rohrmoos Tourist Office helps to organize inexpensive and exclusive one-way and round-trip opportunities between the airports and Schladming. Transfer service and all reservation facilities will be arranged by our advisors of the Schladming-Rohrmoos | Schladming-Dachstein Tourist Office (Mr. Johannes Baltl: Johannes@schladming.at; Ms. Tanja Schweiger: tanja@schladming.at). Feel free to contact them.

For booking rooms in the Sporthotel Royer to a IAS special price (85 EURO/single room; 70 EURO/double room). Contact reservierung@royer.at indicating that you attend the IAS 2012 Meeting.

PERSONAL INSURANCE AND VISAS

Personal insurance is not included in the registration fee. All participants are advised to make their own arrangements. Participants are advised to check on visa requirements. Participants of the field trips (several field trips will cross the Austrian border) requiring any visa or special passports should make the necessary arrangements by themselves well in advance.

For the acquiring of travel visas contact to our advisors of the Schladming-Rohrmoos Tourist Office.

LETTER OF INVITATION

Participants from some countries will need an official Letter of Invitation to be provided with their visa application. These official letters will be sent to delegates by the 29th IAS Meeting only after clearance of registration fee payment. Letters of Invitation do not represent a commitment to provide any financial support.

NO-SMOKING POLICY

Smoking is prohibited in the Conference centre. Special smoking areas are arranged.

LANGUAGE OF THE CONGRESS

English will be the official language of the meeting. No translation facilities will be available.

REGISTRATION FEES

Registration packages will cover congress materials including detailed programme and abstracts, morning and afternoon refreshments and one ticket (1 person) to the Welcome Reception (Opening Ceremony with Icebreaker Party). A printed version of the Field Trip volume will be offered on-site for a special conference price. In addition to the comprehensive scientific programme, the 29th IAS Meeting will provide opportunities for participants to meet, mingle and get to know their professional colleagues in a relaxed setting, outside technical and business streams.

Fee	until 30 April 2012	after 30 April 2012
IAS Members:	300 €	380 €
Non IAS Members:	360 €	440 €
IAS Student Members:	150 €	190 €
Guest of a regular participant	190 €	190 €
Conference Dinner:	58 €	58 €
Day Ticket (only valid 11-13 Sept)		190 €

IAS Student Members can apply for limited travel grants: www.sedimentologists.org

Note that your registration and abstract submissions without payment of the registration fee cannot be considered.

Participants of field trips and short courses must also register for the Meeting. Registration fees are payable by all attendees registered for the meeting and participants of field trips or short courses.

Abstracts will only be included in the conference proceedings if the first author is registered for the meeting.

PAYMENT OPTIONS

Registration should be made online via the IAS conference website.

Follow the instructions given in the registration form.

Payment will be handled using credit cards via the IAS secure server.

Bank transfer: Only by exception the registration fee can be paid by direct bank transfer. The chairpersons: IAS2012@unileoben.ac.at will send you the bank account data.

In case of bank transfer please make sure that the whole amount of registration fees is transmitted to the IAS Meeting account. If there is any bank charge for the transfer, it must be paid by the participant, which means that this charge is not taken out of the dues amount for the 29th IAS Meeting of Sedimentology. Payments must be without charges for the receiver.

You have to send a copy of the transaction (your name, address and your other booked field trips/short courses/conference dinner must be printed clearly on the transaction document) to the treasurer either by e-mail (IAS2012@unileoben.ac.at) or fax (+43 3842 402 6302). This procedure is necessary to avoid any problems with your booking.

Payment on-site: Participants can pay at the registration desk by cash (in EURO): Late registration fee.

CANCELLATION

In case you cancel your participation

full refund will be given until 15 April 2012; until 15 May 2012: 50 percent of the registration fee or the costs for field trips/short courses/conference dinner (minus transfer expenses) will be refunded.

After 15 May no refunding of any payment is possible.

Please note, that there will be no exception to this rule.

Cancellation of under-subscribed field trips/short courses

Please book and pay early to help avoid cancellation of field trips/short courses (deadline 30 April 2012). We realize the inconvenience and expense you may incur due to cancellation. We will make every effort not to cancel something. However, in times it becomes necessary to cancel field trips/short courses due to under-subscription. We cannot accept responsibility for costs associated with any cancellation of under-subscribed field trips or short courses, i.e. airline tickets, hotel costs, etc. Refund of the field trip/short course fee will be issued if it is cancelled.

You will be informed about cancellation of field trips/short courses in May 2012.

SCIENTIFIC PROGRAMME

Contributions to all sedimentological and related themes are welcome. Authors are invited to present their work as oral or poster presentations. Four to six simultaneous sessions (depending on the final number of oral contributions) will be run. Several posters sessions are programmed. Plenary sessions/lectures, keynote speakers and a Public lecture of general interest are planned.

CALL FOR ABSTRACTS

Open Call for ABSTRACTS within the context of the 29th IAS Meeting of Sedimentology in Schladming/Austria.

If you want to submit an abstract either for oral or poster presentation, follow exactly the instructions given in this circular or on the website. 40 Sessions will be organized. They are sorted to the general themes. Themes and Sessions are numbered; these numbers should be indicated on your abstract submission. 13 general themes and an Open Symposium with different sessions will be organized. Submit your abstract at latest on **30 April 2012 following the instructions on www.sedimentologists.org/ims-2012**

Sessions Theme 1: Processes in sedimentation

T1 S1 Sediment generation, provenance, and dispersal

Conveners: Hilmar v. Eynatten (Goettingen/Germany), Gert Jan Weltje (Delft/The Netherlands)

In this session we strive to contribute to a comprehensive understanding of source-sink relations in clastic sedimentary systems. Contributions may include both forward-directed models focussing on sediment generation and dispersal in modern settings, and deductive approaches (i.e. provenance analysis) trying to decipher source-rock characteristics and sediment modifications on transit using the sedimentary record. We specifically invite contributions related to (i) new analytical techniques in sediment characterization, and (ii) quantitative approaches including bulk mass transfer from source to sink. We also invite regional studies highlighting specific geologic problems in modern or ancient settings.

T1 S2 Microbial carbonates

Conveners: Stjepko Golubic (Boston/USA), Bruno Granier (Brest/France)

This session is dedicated to the interactions between 'microbes', organic matter and calcium carbonate: that is mainly summarized under the name 'biomineralization', and it will also deal with bioerosion. Ideally it should be the right place to discuss the nature of the puzzling *Bacinella* structures at the thin-section scale, but also the larger scale, metric to decametric architecture of microbial geobodies.

T1 S3 Cyclic successions and their controlling factors

Conveners: Janos Haas (Budapest/Hungary), Andre Strasser (Fribourg/Switzerland)

Sedimentary successions made up of regular alternations of beds - cycles - are common in various depositional settings from continental to deep-sea realms. The controlling pseudo-periodic processes cover a wide time-range from plate-tectonic movements and long-term climate changes (icehouse-greenhouse periods) of tens of million years, through orbitally forced changes of hundreds or tens of kiloyears to the twice-daily tidal cycles. In general several controlling factors determine lateral and vertical changes in facies characteristics. To determine the complexity of the responses in sedimentary systems and its major dictators is difficult. The aim of the session is the presentation and discussion of concepts and methods for recognition and genetic interpretations of various cyclic successions. Case studies on siliciclastic and carbonate successions are invited. Contributions on the still unsolved problems of the high-frequency peritidal-lagoonal carbonate cycles are especially welcome.

T1 S4 Animals, plants and clastic sedimentary processes in modern and ancient settings

Conveners: Stephen Rice (Loughborough/United Kingdom), Neil Davies (Gent/Belgium)

The impact of animals and plants on sediment transport processes in fluvial, aeolian and marine environments remains understudied and largely unquantified. This session will examine the interactions between biota and clastic sediment transport in modern and ancient settings. Contributions are invited that consider how animals and

plants affect the production of mobile materials, particle entrainment, clast sorting, transport fluxes and sediment deposition. All scales of enquiry and methodological approaches are welcome including experimental work, field studies and numerical modelling. Papers that link process understanding to larger scale sediment transfers or to evidence of animal and plant impacts in the sedimentary record, are particularly pertinent.

T1 S5 Multidisciplinary approach to understand the Precambrian environments

Conveners: Elodie Vernhet (Pointe-a-Pitre, France), Hassane El Chellai (Marrakech/Morocco)

In this session, we invite our colleagues to present their methods and results in every discipline that may highlight the depositional conditions of the Precambrian sedimentary record and lead to a better understanding of the Precambrian world.

T1 S6 Physical, numerical, and analytical modelling of sediment erosion, transport and deposition

Conveners: Joris T. Eggenhuisen (Utrecht/The Netherlands), Jaco H. Baas (Bangor/United Kingdom), Matthieu J.B. Cartigny (Utrecht/The Netherlands)

Deducing the sediment transport processes active during the formation of a deposit from outcrop and core studies alone is a formidable challenge faced by many sedimentary geologists. Physical, analytical and numerical models have proven to be of great value by providing a means to study the formative sedimentary processes in controlled circumstances. The resulting insights have a high potential of supporting genetic interpretations of deposits in the field.

This session welcomes all contributions that present process modelling results that enhance our understanding of the interactions between flow dynamics, sediment transport and bed morphologies. Authors are encouraged to link their modelling work to recent or ancient deposits.

No constraints are put on depositional environment (from alluvial fan to deep-marine settings) or scale of the sedimentary process (from individual sediment particles to sedimentary structures and lithofacies, architectural elements, depositional environments and entire stratigraphic systems). It is anticipated that the mix of subjects and modelling approaches will stimulate cross pollination of different scientific disciplines.

T1 S7 Aeolian sediments and environments

Conveners: Juan Pedro Rodriguez-Lopez (Madrid/Spain), Gonzalo Veiga (La Plata/Argentina), Nigel Mountney (Leeds/United Kingdom), Lars Clemmensen (Copenhagen/Denmark)

Aeolian environments are complex depositional systems that are receiving an increasing attention. Contributions dealing with multidisciplinary approaches on both ancient and modern aeolian systems are welcome, in particular those dealing with the following issues:

- 3D-modelling and high-resolution seismic studies on

aeolian bedforms;

- Windblown input and its effects on deep-sea sedimentary environments.
- Unusual aeolian deposits (e.g. coarse-grained aeolian sediments);
- Aeolian-marine, aeolian-fluvial, aeolian-volcanic systems;
- Relative roles of allocyclic and autocyclic processes;
- Carbonate aeolianites;
- Extraterrestrial aeolian systems and comparative studies with terrestrial counterparts;
- Characterization of aeolian reservoirs.

Sessions Theme 2: Basin analysis

T2 S1 Tectono-sedimentary processes in ancient and modern extensional basins

Conveners: Gianreto Manatschal, Emmanuel Masini (both Strasbourg/France)

Extensional basins in intracontinental rifts or rifted margins were classically linked to high-angle normal faulting, rift grabens or tilted blocks. However, the discovery of long offset low-angle detachment faults in deep-water rifted margins and post-orogenic extensional basins drastically changed the concepts to describe tectono-sedimentary processes in extensional settings. At present, neither conceptual nor numerical models exist to predict the stratigraphic architecture and tectono-sedimentary evolution of these basins. This is mainly due to the lack of observations and well documented field examples. Understanding the overall stratigraphic architecture and tectono-sedimentary evolution of such basins represents a challenging task, with important implications for the understanding of extensional systems. For this session we invite field geologists, sedimentologists, modellers, exploration geologists and geophysicists interested in discussing the tectono-sedimentary evolution of extensional settings, ranging from post-orogenic extensional basins to hyper-extended rift basins, and all other basins within extensional settings.

Sessions Theme 3: Marine depositional environments

T3 S1 Heterozoan carbonates in non-tropical and tropical settings

Conveners: Christian Betzler (Hamburg/Germany), Juan Carlos Braga (Granada/Spain), Finn Surlyk (Copenhagen/Denmark), John Reijmer (Amsterdam/The Netherlands)

In this session we seek for contributions focusing on heterozoan/cool-water carbonates. We aim to bring together contributions studying this type of sediments within tropical and non-tropical settings as well as shallow and deep-water environments. Studies on variations in sedimentation patterns and compositional variations through time are

welcomed, but also geochemical characterizations and associated variations within these sediments. We are also looking for studies that provide a solid database for the documentation of variations within this type of carbonates throughout time and space, both in the fossil record as well as their present-day distribution.

T3 S2 Carbonate sedimentation in hypersaline environments

Conveners: Stephen Lokier (Abu Dhabi/United Arab Emirates), Judith McKenzie (Zuerich/Switzerland), Thomas Steuber (Abu Dhabi/United Arab Emirates)

This session will focus on the formation and deposition of carbonates and associated sediments in both recent and ancient hypersaline environments. We invite contributions that discuss all sedimentary processes in these settings, including, but by no means limited to, the impacts on the biosphere, isotopic constraints and records, geochemistry and sedimentary facies development.

T3 S3 Coastal environments

Conveners: Vincenzo Pascucci (Sassari/Italy), I. Peter Martini (Guelph/Canada)

Climate change and sea-level fluctuations are nowadays one of the crucial topics dealt with many studies on coastal evolution. The climate warming trend and the associated ever increasing melting of glaciers suggest future sea-level rise. However the duration and extent of these events is not known. These processes and events have occurred in the past during glacial and interglacial times and have left clear evidence that could be utilized to understand and surmise what could happen in the future. The principal objectives of the session are: (1) to focus analysis on the morphology, dynamics and sediments of selected past and present coastal environments; (2) to compare and contrast changes in coastal environments associated with eustatic and isostatic movements; (3) to examine the impact of human activities on the evolution of coastal areas, including construction of defensive structures, utilization of coastal areas for tourism or other activities, and inland management of water courses and extraction of fluvial deposits.

T3 S4 Geobiology and sedimentology on continental margins

Conveners: Hildegard Westphal (Bremen/Germany), Wolf-Christian Dullo (Kiel/Germany), Andre Freiwald (Wilhemshaven/Germany), Dierk Hebeln (Bremen/Germany)

Continental margins mediate between the deep-sea and the coastal areas and are linked to processes of both areas. The sedimentary record of this realm is the most complete archive of environmental and geological history. Apart from deposition of reworked biogenic and abiogenic sediment, continental margins also are the locus of *in situ* biogenic sediment formation such as large scale carbonate bodies, presently mainly constructed by azooxanthellate corals. This session aims at discussing the biological, oceanographic and

climatic constraints of geobiological structures on continental margins and their function as environmental archives.

T3 S5 Sediment-benthos interaction in recent coastal environments

Conveners: Daniela Basso (Milano-Bicocca/Italy), Bernhard Riegl (Dania Beach/USA)

Coastal carbonates are strongly dependant on the distribution and growth rate of the benthic carbonate producers, on their ecological succession from first colonization to mature association, and on post-mortem processes affecting their skeletal remains. On the other hand, substrate texture and sedimentation rate are primary controlling factors in benthic facies development. The session is intended as a forum for the discussion of all aspects of the sediment-benthos interaction, including, among others, the geological and environmental controls on the distribution of biogenic sedimentary facies in shallow-waters, the controls on biogenic build-ups from inception to demise, the response of carbonate producers to environmental perturbations such as the ongoing climate change and the human impact, and the biogenic sediment budgets.

Sessions Theme 4: Continental depositional environments

T4 S1 Karst, cave sediments and speleothems

Conveners: Roman Aubrecht (Bratislava/Slovakia), Michal Gradzinski (Krakow/Poland)

The session will be devoted to the latest research concerning karst formation in carbonate and non-carbonate terrains, comparing its geochemistry, timing and climate influence. Another topic of the session will be cave deposits, with a focus on sedimentation in restricted, tube-like spaces. The third topic will concern speleothems in carbonate and non-carbonate caves, they way of precipitation, geochemistry, climatic dependence and eventual organomineralization or biological mediation.

Sessions Theme 5: Diagenesis, fluid flow

T5 S1 Carbonate diagenesis including dolomitization

Conveners: Peter Swart (Miami/USA), Kyger Lohmann (Michigan/USA)

Abstracts are requested on topics associated with carbonate diagenesis. These topics include, but are not limited to, dolomitization, recrystallization, fluid inclusions, associated petrographic and geochemical changes. In particular we welcome contributions which deal with aspects of clumped isotopes and diagenesis.

Sessions Theme 6: Applied sedimentology

T6 S1 Exploration and mining of sedimentary mineral deposits

Conveners: Peter Moser, Hannes Blaha, Heinz Mali (all Leoben/Austria)

The issue of this session is the linking of sedimentology with the exploitation of sedimentary mineral resources. Included are all kinds of sedimentary deposits of clastic sediments like clay, sand, gravel, marl, sandstone, of evaporites like salts and gypsum, biogenic sedimentary deposits of chalk, limestone, dolomite, magnesite, coal, sedimentary deposits of metalliferous ores like banded iron formation, sedex base metal deposits, heavy mineral sands, rollfront uranium deposits and others. Additionally weathered, diagenetically, metasomatically or hydrothermally altered as well as slightly metamorphosed sedimentary deposits like of kaolinite, bentonite, sparry magnesite, talc, siderite, graphite, quartzite, marble and others are taken into account. The mineralogic, petrographic, genetic, geometric etc. sedimentary features of the deposits influencing the prospecting/exploration strategy and procedure, geostatistics, block modelling, grade distribution and control, 3D deposit modelling, geomechanics, rock mass classification, mine design and mining activities are of interest.

T6 S2 Development of aquifers in sediments and sedimentary rocks

Conveners: Giorgio Hoefler-Oellinger (Salzburg/Austria), Marco Filipponi (Murg/Switzerland)

Hydraulic properties of an aquifer depend principally on sedimentological characteristics, e.g., the geometry and grain distribution of the sediment body. All geological strata show an evolution, which can be sedimentation, diagenesis, uplift or erosion. The hydrogeological processes are influenced by this evolution. Even (repeated) climate change affects the aquifer. There are processes lowering or increasing the permeability. In sedimentary rocks, the role of tectonics or karst development, in combination with tectonic uplift or lowering of discharge level, play important roles. The expected changes in geometric properties are important ones in the chemical environment with serious impact on groundwater properties.

T6 S3 Special clays in Mediterranean area

Conveners: Mercedes Suarez (Salamanca/Spain), Vladimir Simic (Belgrade/Serbia)

Special clays (sepiolite, palygorskite, bentonite, saponite, hectorite etc.) are relatively rare mineral commodities through out the world, since the economic deposits are restricted to several countries (USA, Spain, Turkey, Senegal, etc.). Nevertheless, in SE Europe numerous sedimentary sepiolite/palygorskite occurrences have been discovered in last 15-20 years. Those clays, together with some rare bentonite deposits are of interest for sedimentologists because those can be useful as paleoambiental indicators. Economic geologists are always interested in genetic models

of deposits as leading guidance for prospecting new areas. Thus we believe that the proposed session on special clays will help geologists to get a "regional vision" of these types of deposits and the areal extent in the Mediterranean area. The economic importance of special clays is almost endless, particularly in environmental-friendly products (cat and pet litters, waste treatment, industrial absorbents, animal feedstuffs, household uses, etc.).

Sessions Theme 7: Hydrocarbon systems

T7 S1 Advances in the understanding of mudstones as unconventional hydrocarbon deposits

Conveners: Ulrich Bieg (Vienna/Austria), Reinhard F. Sachsenhofer (Leoben/Austria), Hans-Martin Schulz (Potsdam/Germany)

Within recent years production technologies of unconventional hydrocarbon deposits (e.g., shale gas and shale oil, oil shale, tight gas) greatly improved. Being able to upscale from micro/pore-scale to field/production scale by integrating various disciplines, is the key to unlock the potential of future unconventional resources.

This session invites contributions to discussing why some successions are more prolific than others (e.g., due to internal heterogeneities). For this reason controlling factors in an overall sense concerning the depositional environment (eustasy, sea-level changes, palaeoceanographic setting) are addressed. Moreover, the evolution over time due to burial, incorporating changes in maturity and diagenetic effects are crucial factors for uncon-ventional hydrocarbon resources.

T7 S2 Petroleum exploration and sedimentary basin analysis and modelling

Conveners: Ivan Dulic, Radmilo Jovanovic (both Novi Sad/Serbia)

We invite geoscientists to contribute with their research results on exploration and evaluation of petroleum deposits. This session will be focused on petroleum exploration of extracting the predicted subsurface conditions of source, maturation, reservoir, migration, trap and seal in tectonostratigraphic interactive sedimentary basins and their modelling.

T7 S3 Pre-Messinian strata of the Middle-East and the Near-East (with a special focus on oil and gas reservoirs)

Conveners: Bruno Granier (Brest/France), Hans-Joachim Kuss (Bremen/Germany)

We encourage participants with geological and geophysical academic and industry backgrounds to report on projects covering the state of art as well as to focus on defining innovative research directions between industry and academia to explore novel methods for geologic modelling. Case studies will allow to identify areas for future need of

extended research.

T7 S4 Oil and gas reservoirs in EurAsia

Conveners: Sergey Khafizov (St. Petersburg/Russia), Gabor Tari (Vienna/Austria)

This session will be devoted to the current state of knowledge in exploration of siliciclastic and carbonate reservoirs. Special emphasis will be placed on depositional environments and their impact on reservoir presence and quality. The session will address these issues by inviting case studies and best practices demonstrating the best possible prognosis of reservoir quality using multidisciplinary studies in mature, emerging and frontier basins of EurAsia.

T7 S5 Linking texture, flow processes and reservoir quality in deep-marine sandstones

Conveners: Ian Kane (Bergen/Norway), Peter Haughton (Dublin/Ireland)

Depositional reservoir quality is strongly controlled by both detrital clay content and grain size distribution, which equally control, and are controlled by, flow processes during transport and deposition. It has long been known that turbulent flows are particularly efficient sorters of sediment, and that their deposits, turbidites, can reflect this in their well-sorted nature and often excellent reservoir properties. However, in many deep-water reservoirs, sandstones which are interpreted to have been deposited by flows with transitional rheologies, fluctuating between turbulent and laminar, and flows with discrete rheological boundaries (composite or co-genetic flows), are common. The resultant deposits (banded sandstones and hybrid event beds respectively) have complex spatial and stratigraphic distributions and highly variable reservoir quality and are thus crucial to understand in order to develop predictive sedimentological concepts for deep-marine reservoir quality distribution. Additionally, whilst clay distribution and different clay types influence flow processes and deposits, they also have different effects, both negative and positive, on reservoir quality during deeper burial and diagenesis. This session intends to address these issues by inviting papers which link textural fractionation to sedimentological processes and in turn to reservoir quality of the deep-marine sandstones.

T7 S6 Organofacies and organic geochemistry of European unconventional shale plays

Conveners: Axel Emmerich (Karlsruhe/Germany), Hartmut Jaeger (Heidelberg/Germany)

The success of shale gas exploration in North America - potentially turning North America into a net exporter of gas in coming years - and most recently the emerging shale oil industry has led to the question whether such a story could be replicated in Europe. Many researchers, consulting companies as well as international and national oil companies have come up with different, sometimes controversial answers. As being proved by recent shale and oil gas case studies in the U.S., the devil is - as usually - in the details.

Sweet spot detection and the deliberate search for liquid prone plays only a few of those examples directly related to the nature of source rocks in unconventional shale exploration and production. Therefore all geoscientists dealing with source rocks in European oil and shale gas plays are encouraged to submit a contribution - either as oral or poster presentations. Since most potential European shale resource plays already have a long lasting record of conventional E&P activities it is expected that the session will address the following of source rock related topics:

- Organofacies: Palaeoenvironment and syn-sedimentary processes.
- Controls of sequence stratigraphy on organofacies.
- Geochemical characterization: initial TOC and kinetics.
- Geochemical / petroleum systems modelling: quantification of primary and secondary cracking
- Maturation and hydrocarbon expulsion.

Sessions Theme 8: Hazards, events, climatic signatures

T8 S1 Mass-transport deposits, olistostromes and mélange formation in modern and ancient continental margins, and associated natural hazards

Conveners: Andrea Festa (Torino/Italy), Yildirim Dilek (Miami/USA), Sigrid Missoni (Leoben/Austria)

Mass-transport deposits, olistostromes and mélanges represent significant components of both modern and ancient continental margins, including those active, passive and hybrid margin types. Tectonic forces and processes constitute the most common triggering mechanisms to induce both directly (e.g., faulting, thrusting and related seismicity) and indirectly downslope movement and formation of mass-transport deposits, olistostromes and mélanges. The aim of this session is to bring together geoscientists with different backgrounds (e.g., sedimentologists, structural geologists, geophysicists, hydrologists) to examine recent case studies from modern and ancient continental margins in order to better document: (i) the relations between triggering mechanisms, processes and chaotic products; (ii) the dynamics, mechanical stability and morphology of active and passive margins, and (iii) the formation and artifacts of submarine land-slides and the consequences and mitigation of related hazards (e.g. tsunamis). Comparative analyses of modern and ancient examples are particularly important to help us recognize various chaotic deposits in the rock record and the processes of their formation. Field-based sedimentological, stratigraphic, structural, geophysical, deep-ocean drilling, and submersible studies of different active and passive continental margins are welcome contributions.

T8 S2 Tsunami deposits in the historical and geological record: their discrimination and critical contribution to tsunami risk assessment

Conveners: Kazuhisa Goto (Chiba/Japan), David R. Tappin (Nottingham/United Kingdom), Witold Szcucinski (Poznan/Poland)

The devastating earthquake and tsunami that struck the northeast coast of Japan on March 11th 2011 demonstrates that probabilistic analysis on the risk from these infrequent events requires empirical validation from field evidence that may be available both locally and globally. However, a robust discrimination of tsunami sediments from other high-energy deposits, such as storms, is still wanting. As an increasing number of recent tsunami deposits are recognized and described, the goal of recognition becomes attainable but is not yet within reach. We seek for this session contributions on recent, historic and pre-historic tsunami deposits and on any related fields that will advance the characterisation of these deposits and lead to an improved understanding of their frequency in the historic and geologic record.

T8 S3 From the Late Permian to the Middle Triassic: perturbations around the Permian/Triassic boundary

Conveners: Micha Horacek (Tulln/Austria), Rainer Brandner (Innsbruck/Austria), Dunja Aljinovic (Zagreb/Croatia)

The period from the Late Permian to the beginning of the Middle Triassic was a time of major perturbations in the global ocean chemistry, biostratigraphy and even in the sedimentary successions spanning this interval. This session is dedicated this period, especially to bio- and chemostratigraphical, geochemical and sedimentological investigations of the global cycles, extinction and recovery, ocean circulation and climate. The session is also a platform for scientists involved in IGCP Project 572: 'Restoration of Marine Ecosystems following the Permian-Triassic Mass Extinction: lessons for the present'.

T8 S4 Late and End-Triassic events, a multidisciplinary approach

Conveners: Sylvain Richoz (Graz/Austria), Leopold Krystyn (Vienna/Austria), Spela Gorican (Ljubljana/Slovenia)

The inauguration of the Global boundary Stratotype Section and Point (GSSP) for the Triassic-Jurassic Boundary in Austria is an opportunity to take a closer look on the Late and End-Triassic events and their interplay and their signals in the sedimentary record. The Late Triassic is a time of strong disturbance in the marine environment and biodiversity with repeated events and crises - at the Early Carnian/Late Carnian boundary, the Early Norian/Middle Norian boundary, the Norian/Rhaetian boundary, likely within the Rhaetian and finally at the Triassic/Jurassic boundary. The overall impression is that despite new originations, concomitant biodiversity decline may be punctuated by a series of accelerated steps between the

Carnian to Rhaetian, while the T-J boundary event may have been the final strike. This session focuses on the recent developments on these different events and crises from a multidisciplinary point of view (e.g., palaeontology, sedimentology, geochemistry, modelling). Papers discussing the Early Jurassic recovery of eco-systems are also welcome.

T8 S5 Mesozoic oceans and climate - sedimentary archives on land and under the sea

Conveners: Helmut Weissert (Zuerich/Switzerland), Ulrich Heimhofer (Hannover/Germany)

The aim of this session is to provide a platform for discussion among sedimentologists interested in Mesozoic ocean and climate history. We encourage contributions that contribute to a better understanding how orogenesis, erosional history and climate are linked, how ocean anoxia left its signature in marine sediments, how changes in climate had an impact on oceanography, how changing ocean chemistry affected marine life or how the orbital pulse is monitored in sedimentary records.

T8 S6 Sedimentology of the crisis intervals in the Earth history

Conveners: Geza Csaszar (Budapest/Hungary), Finn Surlyk (Copenhagen/Denmark)

There were several crisis situations in Earth history. Some of them are well known as extinction periods when many species, genera and even families became extinct. The majority of them is also known as turning points of the Earth history from other aspects. These affairs can be caused by a substantial decrease or increase of temperature on the surface of the Earth. Causes can be intra-terrestrial and extraterrestrial and the reason cannot be identified in many cases. The results of temperature decrease are often manifested in glaciations over large parts of the globe. The glacial intervals have also caused changes in the type of sedimentation. Almost nothing is known about short-term increases of temperature. In addition to the special type of sedimentation of glacial periods it is high time to pay more attention to short-term changes of temperature which possibly can be recognised in sediments. The session invites contributions which discuss signals in sediments caused by radical increases or decreases of temperature, the occurrence of extra radiation, or changes in mineral or element composition to distinguish the various causes in the frequent but not systematic changes in the Earth history.

T8 S7 Climate-environmental deteriorations during greenhouse phases: Causes and consequences of short-term Cretaceous sea-level changes

Conveners: Michael Wagreich (Vienna/Austria), Xiumian Hu (Nanjing/China), Ismail Omer Yilmaz (Ankara/Turkey)

The recent rise in sea-level in response to rising levels of atmospheric greenhouse gases is a primary concern for society. Evidence from Earth's history indicates that

Cretaceous sea-level changes occurred at rates an order of magnitude or more higher than that observed at present. The session aims to bring together scientists working on topics like Cretaceous sequence stratigraphy, cyclo-stratigraphy, paleoclimatology and paleoceanography to discuss causes and consequences of sea-level changes during Cretaceous times.

Sessions Theme 9: Modelling and application

T9 S1 Sedimentology in 3D subsurface modelling - working towards integrated workflows

Conveners: Juergen Groetsch (Rijswijk/The Netherlands), Maria Mutti (Potsdam/Germany)

Subsurface reservoir modelling is a technology which is used in a variety of different areas in industry like water resource management, fluid and gas storage and containment or the hydrocarbon industry. In all these efforts sedimentologist provide crucial input on modelling the respective reservoirs including inherent uncertainties.

In industry, the standards for clastic reservoirs reservoir modelling workflows are relatively well established while those for carbonate reservoirs are still considered less mature. The purpose of this session is to provide a forum for the global sedimentology community to share approaches and workflows on clastic and carbonate reservoir modelling aiming towards further improving the links between sedimentology and subsurface modelling and, hence, towards improving subsurface workflows.

Sessions Theme 10: Sediments in mountain chains

T10 S1 Cherty sediments from oceans to mountains

Conveners: Peter Baumgartner (Lausanne/Switzerland), Patrick De Wever (Paris/France)

Cherts in shallow- and deep-water sediments have usually a biogenic origin. While siliceous sponges have been a benthic biogenic silica source for the whole Phanerozoic, the plankton source shifted from radiolarians in the Palaeozoic-Mesozoic to diatoms in the Cenozoic. Is the presence of chert in sediments indicative of high nutrient levels? What are the palaeoenvironmental and diagenetic controls of the formation of chert? How does the abundance of chert through time relate to the global silica and carbon cycles?

T10 S2 Tectonics and sedimentary evolution of the Palaeogene/Neogene basins in the Alps-Carpathians-Dinarides-Hellenides

Conveners: Adamantios Kiliadis (Thessaloniki/Greece), Wolfgang Frisch (Vienna/Austria)

The proposed session aims to bring together geoscientists studying the tectonic and sedimentary history of Tertiary basins in the Alps and Southeastern Europe. Some of these basins, apart from their scientific interests are also of great economical significance (e.g., gold bearing strata, hydrocarbon or lignite reservoirs).

Basins analysis is a very important part of geological research to highlight orogenic processes and their alternations, as well as the overall geodynamic setting (extension vs. compression), and the architecture of an orogen. The detailed documentation of the strata geometries of basins fills, the sedimentary facies and chronostratigraphy, combined with structural studies and faults-slip data to determine principal strain axes, will provide significant information on the palaeogeographic evolution of orogenic belts, the history of uplift and subsidence and possible propagation patterns of the basins due to subduction-related processes (e.g., rollback of the subduction zone). Furthermore, younger basins of Pleistocene up to recent give in combination with other morphotectonic data, important information about active fault zones.

Sessions Theme 11: Stratigraphy and facies

T11 S1 Calcareous algae and carbonate platforms

Conveners: Ioan I. Bucur (Cluj-Napoca/Romania), Elias Samankassou (Geneva/Switzerland), James Nebelsick (Tuebingen/Germany)

Calcareous algae are important components of geological and present-day forming shallow-water carbonate deposits (carbonate platforms). Their systematic investigation, as well as information on their space and time distribution may significantly contribute to understanding local paleoecological relationships and reconstructing depositional environments. Based on presentations and related debates, the session aims to propel new arguments for the significance of calcareous algae in the interpretation of shallow-water carbonate facies, starting from the following main themes:

- Algae as carbonate producers.
- Carbonate diagenesis and its relationship to paleoecology and taphonomy of calcareous algae.
- Algal biodiversity and sedimentary evolution of carbonate platforms.
- Algae and sequence stratigraphy: possibility to use calcareous algae assemblages, and other algal-related microorganisms to identify sequence stratigraphic events.
- Algae in reefs and organic build-ups.
- Using the palaeoecology of algae to help reconstruct platform and ramp morphologies.

T11 S2 Advances in chemostratigraphy

Conveners: Adrian Immenhauser (Bochum/Germany), Volker Vahrenkamp (Abu Dhabi/United Arab Emirates)

This session will focus on the application and advances in

the field of chemostratigraphy of marine and terrestrial sediments and sedimentary rocks including laboratory precipitation experiments. We welcome contributions dealing with traditional and non-traditional (stable and radiogenic) isotope systems, trace and major elements as well as the numerical modelling of geochemical data sets. An important aspect includes the field of diagenesis affecting and potentially limiting the application and dating of geological archives by means of their geochemical record.

Sessions Theme 12: Geophysics/Seismics/Petrophysics

T12 S1 Carbonate facies and petrophysical properties

Conveners: Philippe Leonide (Marseille/France), Anneleen Foubert (Leuven/Belgium), Francois Fournier (Marseille/France), Rudy Swennen (Leuven/Belgium), John Reijmer (Amsterdam/The Netherlands)

The session 'Petrophysical properties and seismic expression of carbonates' aims to bring together studies concerning the petrophysical behaviour of carbonate sediments and rocks in all its aspects. We invite presentations dealing with the impact of diagenesis on porosity, permeability and elastic properties at different scales, emphasizing up-scaling and heterogeneity. Particularly, new approaches to study petrophysical parameters in three dimensions and comparative approaches between 3D studies and other petrophysical characterization techniques are welcomed. The session has a broad scope as petrophysical properties of complex carbonates can only be understood if studies are performed at different scales and from different viewpoints (from microporous till fracture-controlled reservoir characteristics). Topics:

- 3D imaging and characterization of pore network in carbonates;
- Impact of depositional and diagenetic processes on porosity, permeability and elastic properties;
- Depositional, diagenetic and stratigraphic architecture of carbonate reservoirs: origin, heterogeneity and reservoir properties upscaling;
- Seismic expression of depositional and diagenetic features in carbonates;
- Electrical properties and georadar imaging of carbonate rocks;
- Petrophysical properties and reservoir architecture of fractured carbonates.

Sessions Theme 13: Sedimentary ore deposits

T13 S1 Sedimentary hosted lithium deposits: depositional setting and genesis

Convener: Nenad Grubin (Belgrade/Serbia)

Lithium is a relatively rare element: it ranks 27th in the

suite of elemental abundance, but its importance increase rapidly. The average amount in the earth's upper crust has been estimated at about 20 ppm. There are about 145 minerals containing lithium as a major component (>200 with >0.002% Li₂O), and about 25 contain over 2% Li₂O. Large-scaled borate deposits in the USA and Turkey are hosted within Neogene lake sediments associated with contemporaneous faulting and volcanism. Borates within the lake sediments appear to be chemical precipitates that formed as the concentration of boron in the lake waters reached temporary saturation levels, either as a result of changes in evaporation rates, or because of influxes from nearby hot springs. On the other hand, all previously known major lithium deposits with commercial potential such as brine deposits and pegmatites, have been formed because of lithium's higher solubility than most other cations, so it sometimes has concentrated in flowing and cooling magma and/or its accompanying aqueous fluids, as well as in evaporating brines. All contributions dealing with depositional setting and the genesis as well as case studies are welcome.

T13 S2 Black shales and ore deposits

Conveners: Jan Pasava (Prague/Czech Republic), Bernd Lehmann (Clausthal-Zellerfeld/Germany)

Black shales host a wide spectrum of mineral deposits (Au, PGE, U, Mo, Ni, Mn, P, V, Hg, Sb, W, Ba, and minor elements). Our session will focus on various ore forming processes and the role of black shales in the formation of economically important metal enrichment.

T13 S3 Sediment-hosted base-metal deposits

Conveners: Johann G. Raith (Leoben/Austria), Henryk Kucha (Krakow/Poland), Adrian Boyce (Glasgow/Scotland)

Siliciclastic and carbonate rocks are the major host rocks of various types of base-metal deposits, which are not only major resources of Cu, Pb and Zn but may also contain some rare high-tech metals and elements of environmental concern (e.g., Ge, Cd). This session invites contributions dealing with ore genetic and modifying processes of these deposits and their relationships to host sediments, at all scales, from the study of large-scale geotectonics and fluid flow, to the study of trace element and isotope geochemistry, including geochronology, and the role of microbes in their formation.

T14 Open Symposium

SUBMISSION OF ABSTRACTS

30 April 2012: Deadline for abstract submissions and payment of the registration fee.

The 29th IAS Meeting of Sedimentology will accept contributions from any field of sedimentology and related sciences. Presenting authors of abstracts at the 29th IAS Meeting must register for this meeting and pay their registration fee not later than 30 April 2012. The fees due correspond to the date of payment, not to the date of abstract submission. Presenting authors not registered and paid by this date will have their abstracts removed from the programme and abstract book.

To submit an abstract follow these steps: Indicate the scientific theme and the scientific session for which your abstract is to be considered.

Each registered participant can submit only two abstracts as first author (one oral and one poster presentation), but may be a co-author of multiple presentations. All correspondence regarding the abstract will be restricted to the corresponding author.

Abstract preparation

Follow exactly the given instructions. Abstracts will be reviewed before their final acceptance. Every abstract which follows not exact the instructions, will be sent back to the authors to correct the form. Re-submit the corrections within two weeks. If the corrections receive not in time, the abstract will be rejected.

Identification of your abstract: name your file by the first author, the session and if you try to have a talk or a poster presentation, e.g. name-T3 S2-talk or T9 S1-poster

Guidelines

Heading (Times New Roman, 12 pt., bold)

Name, Prenom (Times New Roman, 12 pt., regular)

(e.g., Scientist, O.¹, Researcher, Y.², Postdoc, P.³)

Address: post address, email address (Times New Roman, 12 pt., regular)

(e.g., 1: Institution, postal code-city, Country; e@mail)

- Maximum extent size of the **abstract text is 4.000 characters including spaces, heading, names, address, text and acknowledgements.**
- The abstract should include a brief introduction followed by a summary of methods, results and conclusions.
- Use Times New Roman or Arial standard font throughout. Font size 12 pt., regular.
- Only pure Latin letters are accepted. No additional characters are allowed, also not in the given names.
- References, tables, figures or any other graphics are not permitted. Equations and symbols (e.g., Greek symbols) must be typed. Please, use metric measurements and symbols.
- Fossil names should be indicated in *italics*.
- Authors are advised to prepare their abstracts using a Word or Word-compatible text editor. Upload the entire abstract in the format outlined below.
- The English language will not be corrected.

Acknowledgements: A brief sentence(s) in Times New Roman, 12 pt., regular.

To submit the abstract follow exactly the instructions given on the website.

PRESENTATION MODES

There will be both oral and poster presentations in all sessions. The organizers particularly encourage poster presentations.

Participants will be able to choose their preference (oral or poster mode) in the application form, but their definite mode of presentation will be decided by the Scientific Committee and the respective Conveners, based on space / time restrictions.

Oral Presentation

The allocated time for oral presentations will be 20 minutes in total. This includes time for the presenter to be introduced, present his/her contribution, and to answer questions of the audience. Presenters should plan their actual presentation for no more than 15 minutes. There is a tight schedule and it is important that each presenter stay within the time limit.

Each session room will be equipped with a computer with projector and a pointer. You will not be able to use your own computer for your presentation.

Poster Presentation

For each poster, individual freestanding display boards will be allocated. The poster board usable space will be 120 cm high and 85 cm wide (DIN A0 format).

A wide room will be available for poster presentations and several poster sessions will be programmed. Each session will be scheduled on a specific day. Posters will be displayed all day. Authors are kindly asked to put up their posters on the day where the specific session is scheduled as soon as possible (8:00 - 8:45 h).

Material (e.g., double-faced adhesive tape) for mounting the poster on the boards will be provided at the registration desk.

FIELD TRIPS

5 Pre-Meeting and 6 Post-Meeting field trips will be organized within the context of 29th IAS Meeting. All field trips require a minimum participation of 20-25 and can accommodate up to a maximum of 25-50 persons.

All field trips will start and end in Schladming.

Note that field trips involve travel in other countries than Austria: Bosnia/Herzegovina, Croatia, Germany, Hungary, Italy, Slovakia and Slovenia. Participants to the field trips requiring any visa or special passports should make the necessary arrangements by themselves well in advance.

Important notes regarding field trips

- Field trips are limited in size and are reserved on a first-come, first-served basis and must be accompanied by full payment. A wait list will be created and the organizers will notify you if space becomes available. We make every effort that those who wish can participate.
- Before purchasing non-refundable travel tickets, confirm that the trip will take place, as trips may be cancelled if under-subscribed.
- In some cases a booking of a single room is not possible or single rooms are limited. If you wish a single room, please note this on the registration form. A single room booking must be also accompanied by full payment.
- Several weeks prior to the trip, you will receive information with details of meeting points, transportation during the trip, phone number and email address of trip leaders.
- Proper clothing and supplies are needed for the outdoors, mostly in mountainous areas (e.g., mountain boots, hat, wind breaker, umbrella, sunscreen, rucksack, insect repellent). Notify that it can also be cold. Most trips include hiking in mountainous areas. Participants are advised to check local weather forecasts.
- Neither the organizers nor the field trip leaders maintain insurance covering illness or injury for individuals.

Pre-Meeting Field Trips

A1 End-Triassic crisis events recorded in platforms and basins of the Austrian Alps. The Triassic/Jurassic and Norian/Rhaetian GSSPs (Austria)

Sylvain Richoz (Graz/Austria), Leopold Krystyn (Vienna/Austria), Axel von Hillebrandt (Berlin/Germany)

Duration: 4 days: 07-10 September

Includes: field trip guidebook, lunch packets, transportation, accommodation with breakfast and dinner.

Price: double room 440 EURO/person; single room 500 EURO/person.

Participants: Minimum 21, Maximum 42.

This field trip is a unique opportunity to visit the (I) Norian/Rhaetian and Triassic/Jurassic GSSPs (Global Stratotype Section and Point) in the Austrian Alps and to see (II) how the Late Triassic biotic crisis events are recorded in basinal and platform settings and (III) to understand the sedimentary interactions between platform and basin during this time of multiple crisis. We will visit

- Norian strata in a pelagic off-shore, Hallstatt-type, and facies near its type locality.
- The Norian/Rhaetian GSSP in Hallstatt.
- Norian platform sequence (Dachstein facies, Lofer cycle).
- Rhaetian basinal sequences in off-shore (Hallstatt) and intra-shelf (Koessen) facies.
- Rhaetian reefs and their drowning/extinction history.
- The Triassic/Jurassic GSSP at Kuhjoch (extinction history in basin).

We will travel around the Northern Calcareous Alps (Salzkammergut region, Salzburg, and Tyrol). This area is a geological highlight in one of the most classical geological areas of the world.

A2 Marine to continental depositional systems of Outer Dinarides foreland and intra-montane basins (Eocene-Miocene, Croatia and Bosnia-Herzegovina)

Ervin Mrinjek (Zagreb/Croatia), Oleg Mandic (Vienna/Austria), Igor Vlahovic (Zagreb/Croatia)

Leaders days 1-3: Ervin Mrinjek, Wojciech Nemecek, Goran Miksa, Vili Penciger, Jasenka Sremac, Ivo Velic, Igor Vlahovic (all Zagreb/Croatia)

Leaders days 3-5: Oleg Mandic (Vienna/Austria), Alan Vranjkovic (Zagreb/Croatia), Hazim Hrvatic (Sarajevo/Bosnia- Herzegovina), Igor Vlahovic (Zagreb/Croatia)

Duration: 5 days: 06-10 September

Includes: field trip guidebook, lunch packets, transportation, accommodation with breakfast and dinner.

Price: double room 550 EURO/person; single room 630 EURO/person.

Participants: Minimum 25, Maximum 50.

The excursion will focus on deposition during development of the Dinaride fold thrust belt. The Palaeogene of Northern Dalmatia is characterized by deposition in a regressive sequence from foreland to marginal marine and alluvial settings. In the Neogene a series of longitudinal, intra-montane basins was formed providing accommodation space for up to 2000 m thick lacustrine carbonates and coals. The following topics will be presented and discussed in the field:

- Late Eocene to Oligocene marginal marine foreland deposits with very rich ichnofossil assemblages.
- Geodynamic evolution and palaeogeography of the Miocene Dinaride intra-montane Lake System.
- Lacustrine carbonate factories, orbital forcing and depositional response to climate changes in lacustrine settings.
- Lignite deposition in the marginal lake, marsh and peat settings.
- Massive Tertiary carbonate breccia.

The field trip includes stops in the Velebit Mt., Promina Basin and Sinj Basin in S Croatia and Livno and Tomislavgrad basins in SW Bosnia and Herzegovina. This area of the Dinaride High Karst Zone is famous for its spectacular mountain landscapes and typical karstic phenomena, being located close to the Adriatic Coast.

A3 From Late Triassic passive to Early Cretaceous active continental margin with dominantly carbonate sediments in the Transdanubian Range, Western Tethys (Hungary)

Geza Csanar, Janos Haas, Orsolya Sztano, Tamas Budai, Balasz Szinger (all Budapest/Hungary)

Duration: 4 days: 07-10 September

Includes: field trip guidebook, lunch packets, transportation, accommodation with breakfast and dinner.

Price: double room 440 EURO/person, single room 500 EURO/person.

Participants: Minimum 25, Maximum 50.

The field trip area is restricted to the Transdanubian Range, a unique tectonic unit comprising a palaeogeographic position between two oceanic domains. This is expressed in the facies distribution, with affinities either to the Eastern Alps/Western Carpathians or to the Dinarides/Southern Alps. These affinities can be followed in both time and space:

- Lofer cyclic Late Triassic platform and platform margin reef carbonates, slope and basinal Late Jurassic limestones.
- Oncoidic to oolitic lower Early Jurassic platform limestones.
- Ammonitico rosso type Early Jurassic sub-littoral facies variations reflecting the early phase of the extensional tectonic movement and the distances from the submarine highs.
- Ammonitico rosso type nodular and well bedded, condensed basinal Middle Jurassic carbonate and radiolarite formations and highly lacunose limy sediments on submarine highs within the basin.
- Giant Middle Jurassic neptunian dykes in Late Triassic limestone and dolomite successions with their Early Jurassic limestone fragments.
- Scarp breccia composed of Late Triassic and Early Jurassic limestones along the slope of submarine highs.
- Condensed Late Jurassic and Early Cretaceous limestone to marl sequence with calciturbidites, debrites and slump scars.
- Foreland basin type Early Cretaceous coarse-grained clastics with deep-sea fan lobes, channels and reworked Urganian type platform carbonate clasts.

In addition to the products of the great variety of sedimentary environments determined by the change of extensional and compressional type tectonic movements you will have chance see the touristic landscape south of the River Danube and north of Lake Balaton.

A4 The Rannach Facies of the Graz Palaeozoic (Eastern Alps, Austria)

Fritz Ebner (Leoben/Austria), Bernhard Hubmann (Graz/Austria)

Duration: 3 days: 08-10 September

Includes: field trip guidebook, non hammer guided city tour in Graz, 1 lunch packet, 2 x lunch in restaurant, transportation, accommodation with breakfast and dinner.

Price: only single rooms, 360 EURO/person.

Participants: Minimum 20, Maximum 30.

The stratigraphic sequence of the Graz Palaeozoic comprises Silurian to Late Carboniferous sediments that occur within a mid-Cretaceous thrust complex which is sealed by Late Cretaceous 'Gosau' sediments. During the excursion we present the stratigraphy and facies architecture of the nearly un-metamorphosed Rannach Facies at the upper structural level of the thrust complex.

Continuous sedimentation through that time span, as well as the lack of Variscan activities and the missing Permo-Mesozoic cover hamper the integration of the Rannach Facies within the Palaeozoic rocks of the Eastern Alps. To see following history:

- The succession indicates a sedimentation area changing from a passive continental margin with intra-plate volcanism to shelf and platform geometries during Silurian to Devonian time.
- During early to middle Devonian time deposition changed from near-shore facies to open platform environments, during the Late Devonian and Carboniferous the carbonate platform was drowned and pelagic limestones were deposited.
- In contrast to other Austroalpine Paleozoic areas in which unconformities or continental molasse environments occur due to the Variscan orogeny, fossiliferous marine sedimentation continues up to Early Moskovian levels.

A5 Siderite and magnesite mineralizations in Palaeozoic strata of the Eastern Alps (Austria)

Walter Prochaska (Leoben/Austria)

Duration: 1 day: 10 September

Includes: field trip guidebook, lunch packet, transportation.

Price: 100 EURO/person.

Participants: Minimum 20, Maximum 40.

The field trip focuses on the siderite and sparry magnesite mineralizations in Palaeozoic strata of the Eastern Alps. The Erzberg siderite deposit near Eisenerz presently is the only operating iron mine in Austria and one of the biggest siderite mines in the world. Currently the Austrian iron ore production of about 2 Mio t is exclusively produced from this mine. The siderite body generally is hosted by fine-grained limestones of Devonian age, similar to equivalent siderite deposits in the surroundings. The sparry magnesite mineralizations occur exclusively in Carboniferous host-rocks. In both mineralizations metasomatic-epigenetic structures are dominant.

We will see and discuss a very complex mineralization history by ore forming fluids, which reveal characteristics of residual brines.

- Epigenetic models for the origin of these mineralizations are favoured and based on the investigations on the fluid chemistry and radiometric age dating.
- The ore forming fluids reveal characteristics of residual brines produced during evapo-concentration of seawater for the siderite occurrences, regardless their host-rocks and stratigraphic position.

The data suggests a Permo-Triassic origin of the mineralizing fluids; at that time huge masses of evaporites were deposited in the northwestern Tethyan realm. Later, in Late Triassic times, evaporitic brines were mobilized and their circulation led to siderite as well as magnesite formation.

The field trip will cross a very impressive alpine landscape. We will see the 'Austria pyramid' (Steirischer Erzberg) and will travel along the classical iron route with its historical villages and townships.

Post-Meeting Field Trips

B1 Middle Triassic platform/basin transition along the Alpine passive continental margin facing the Tethys Ocean (Gamsstein; Styria, Austria)

Richard Lein (Vienna/Austria), Leopold Krystyn (Vienna/Austria), Sylvain Richoz (Graz/Austria)

Duration: 1 day: 14 September

Includes: field trip guidebook, lunch packet, transportation.

Price: 100 EURO/person.

Participants: Minimum 20, Maximum 30.

The Triassic sedimentary succession of the northwestern Tethyan realm is characterized by a complex carbonate platform

- basin pattern, especially in Middle Triassic to early Late Triassic times. Theme of this field trip is the onset and demise of carbonate platforms and their platform/basin transitions: To see two superimposed shallow-water carbonate complexes of Middle Triassic age (Steinalm ramp and Wetterstein platform of the classical north-alpine Mesozoic) together with their basin-ward transition to resedimented (Raming-Formation) and deep basinal carbonates (Reifling-Formation). To see and discuss:

- Growth and internal architecture of the Steinalm ramp and the Wetterstein platform.
- Ramp vs. platform margin sedimentation and carbonate platform progradational sequences.
- Breakdown of the carbonate production and carbonification of the Wetterstein platform in the wake of the Carnian Crisis.
- Sedimentary evolution and palaeodepth reconstruction of the coevally subsiding attached basin (Reifling Formation).
- Middle Triassic platform-basin palaeogeographic reconstruction of tectonically isolated platform fragments.

Object of the excursion is Mount Gamsstein in the eastern Northern Calcareous Alps (Styria), situated 10 km east of the classical Middle Triassic basinal sequence of Grossreifling.

B2 Jurassic active continental margin deep-water basin and carbonate platform formation in the north-western Tethyan realm (Austria, Germany)

Hans-Juergen Gawlick (Leoben/Austria), Sigrid Missoni (Leoben/Austria), Felix Schlagintweit (Munich/Germany), Hisashi Suzuki (Kyoto/Japan)

Duration: 4 days: 14-17 September

Includes: field trip guidebook, lunch packets, transportation, accommodation with breakfast and dinner.

Price: double room 440 EURO/person; single room 500 EURO/person.

Participants: Minimum 25, Maximum 50.

This field trip will show the sedimentary response of the transition from a passive to an active continental margin: To see the complete Jurassic evolution of the Austroalpine (Tethys-side), with focus on a complex active continental margin evolution from Middle Jurassic to Early Cretaceous with the interplay of trench formation, mass movements, onset of carbonate platforms. We will visit:

- Early Jurassic condensed carbonates (pelagic platform).
- Middle to Late Jurassic radiolaritic/argillaceous trench formation in front of advancing nappes and large-scale mass movements (e.g., olistostromes, large-scale slides).
- Onsets of Late Jurassic carbonate platforms in an active margin setting.
- The interplay of carbonate production and basin formation in an active margin setting.
- The work of the carbonate factories during uplift of an orogen and the extensional collapse.
- Earliest Cretaceous drowning of carbonate platforms due to siliciclastic input.
- Palaeogeography of the Jurassic active margin in the Austroalpine.

The whole story is visible in the central Northern Calcareous Alps (Salzkammergut region, Salzburg and Berchtesgaden Calcareous Alps). This area is not only a geological highlight in one of the most classical geological areas of the world.

B3 Mesozoic deep-water basins of the eastern Southern Alps (Slovenia)

Spela Gorican, Adrijan Kosir, Duje Kukoc, Luka Gale, Tea Kolar-Jurkovsek, Andrej Smuc, Bostjan Rozic, Dragomir Skaberne, Bogomir Celarc, Ladislav Placer (all Ljubljana/Slovenia)

Duration: 3 days: 14-16 September

Includes: field trip guidebook, lunch packets, transportation, accommodation with breakfast and dinner.

Price: double room 350 EURO/person; single room 390 EURO/person.

Participants: Minimum 20, Maximum 30.

The field trip offers a good opportunity to examine facies associations of Mesozoic deep-water settings that can be linked with palaeogeographic units of the Dinarides and are also comparable to those of the Southern Alps in northern Italy. Stratigraphic successions of different basins that formed on rifted continental margin of the Adriatic plate are nicely exposed in the Julian Alps. The following palaeogeographic units have been distinguished: the Bovec and Bled Basins that formed near the end of the Early Jurassic, the Julian High (comparable to the Trento Plateau of the Southern Alps), and the Tolmin Basin, which existed since the Triassic and was bordered by a large stable carbonate platform. Among these basins, the Bled Basin occupied the most distal position on the continental margin. This position is inferred from the age of turbiditic deposits that started to accumulate in the Valanginian-Hauterivian in the Bled Basin but much later, in the Campanian-Maastrichtian, in the Tolmin Basin. To see:

- Middle Triassic pelagic interval within a succession of platform limestones.
- Complete Early Jurassic to mid-Cretaceous successions of these palaeogeographic units (from syn-rift breccias, post-rift pelagic sediments and calcareous turbidites, to the first 'flysch-type' deposits).

The field-trip area lies in a beautiful landscape of the Triglav National Park.

B4 Palaeokarst, neptunian dykes, collapse breccias, mud-mounds and sedimentary unconformities (Western Carpathians, Slovakia)

Roman Aubrecht (Bratislava/Slovakia)

Duration: 3 days: 14-16 September

Includes: field trip guidebook, lunch packets, transportation, accommodation with breakfast and dinner.

Price: double room 350 EURO/person; single room 390 EURO/person.

Participants: Minimum 25, Maximum 50.

This 3-day field trip will include visiting of localities of

- Miocene paleokarst with 15 million year old speleothems, rich terrestrial fossil fauna found in caves, Miocene (Late Badenian) transgression surfaces.
- Late Cretaceous paleokarst which originated after main tectonic phases in the Central Western Carpathians.
- Mid-Cretaceous paleokarst in the Pieniny Klippen Belt.
- Jurassic synrift deposition in the Pieniny Klippen Belt, including hardgrounds, cliff- and cave collapse-breccias, neptunian dykes, stromatactis mud mounds (including a locality where sponge origin of enigmatic stromatactis structures has been proven).

The field trip area is located in the lowlands or hilly areas of western Slovakia. We will cross the capital of Slovakia, Bratislava.

B5 Neogene pull-apart basins in the Eastern Alps (Austria)

Wilfried Gruber (Leoben/Austria), Reinhard F. Sachsenhofer (Leoben/Austria), Michael Wagreich (Vienna/Austria)

Duration: 1 day: 14 September

Includes: field trip guidebook, lunch packet, transportation.

Price: 100 EURO/person.

Participants: Minimum 20, Maximum 50.

Neogene pull-apart basins formed in the Eastern Alps during the final stages of the Alpine orogeny along major strike-slip faults. Although the thickness of the basin fill varies significantly from a few hundred metres (e.g., Leoben Basin) to more than 2 km (e.g., Fohnsdorf Basin), the general stratigraphic succession is similar in all basins: Typically, these intra-montane basins are filled from bottom to top by fluvial sediments, a single thick coal seam, lacustrine and deltaic rocks. This sequence reflects the high subsidence rates characteristic for tectonically controlled basins. Outcrops in the Leoben and Fohnsdorf basins will stimulate discussions on a wide variety of topics including:

- Basin formation and basin inversion during continental collision.
- Sedimentation in pull-apart basins.
- Palaeogeography of the Miocene Alps.
- Coal accumulation in low-lying and raised mires.
- Petroleum source rocks in pull-apart basins.
- Natural resources (coal, coal-bed-methane, geothermal energy, bentonite, construction material).

The field trip area is located in the lowlands and hilly areas of the Eastern Alps with a beautiful landscape.

B6 Permian/Triassic boundary and Lower Triassic in the Dolomites, Southern Alps (Italy)

Rainer Brandner (Innsbruck/Austria), Micha Horacek (Tulln/Austria), Lorenz Keim (Bolzano/Italy)

Duration: 3 days: 15-17 September

Includes: field trip guidebook, lunch packets, transportation, accommodation with breakfast and dinner.

Price: double room 340 Euro/person, single room 380 Euro/person.

Participants: Minimum 25, Maximum 50

The field trip focuses on the sedimentary response of the end Permian mass extinction and the time of recovery in the whole Early Triassic. Detailed magneto- and chemostratigraphy enable correlations of cycles and sequences along the wide ramp. This should provoke a discussion on eustatic sea-level changes and climatic changes. The PTB mass extinction of carbonate producing organisms prevented the evolution of a rimmed shelf area for the whole Early Triassic. After the exceptionally long lasting recovery period of reefal build-ups in the whole Tethys area, the first appearance of reef building organisms was found in the early Middle Triassic. The lack of reefal build-ups and binding organisms may have caused the extreme mobility of loose carbonate and siliciclastic sediment piles, which have been removed repeatedly by storm-dominated high energy events. This generated a storm-dominated stratification pattern.

What you will see

- End-Permian/PTB in two different facies realms: shallow marine environment and coastal environment.
- Sections perfectly showing the P-T Event as a change in ocean currents.

- evidence for the change of carbonate precipitation on sea-floor, change in ocean chemistry from the Permian to the Triassic (calcite versus aragonite sea?). Instabilities in carbonate precipitation with and after the End-Permian event.
- High resolution stratigraphy in the storm dominated stratification pattern in the Early Triassic along the E-W oriented gentle ramp of the Dolomites. Shifting of facies within cycles and sequences according to sea-level changes and possibly also climatic changes.
- Typical sedimentary evolution of the classical Werfen Formation in the Dolomites.
- PTB and Early Triassic sections that are correlatable by Palmag and chemostratigraphy (C and S ...) with other sections in the Germanic and Tethys facies realms.

The Dolomites are a world famous geologic site that has become a UNESCO world heritage with excellent outcrops and a terrific landscape.

SHORT COURSES

4 Pre-Meeting and 4 Post-Meeting short courses will be organized within the context of 29th IAS Meeting. All expert training short courses require a minimum participation between 10-20 up to a maximum between 12-40 persons.

Important notes regarding Short Courses

- Short courses are limited in size and are reserved on a first-come, first-served basis and must be accompanied by full payment. A waiting list will be created and the organizers will notify you if space becomes available. We make every effort that those who wish can participate.
- Before purchasing non-refundable travel tickets, confirm that the short course will take place, as courses may be cancelled if under-subscribed.
- All short courses will take place at the conference location. Several weeks prior to the short course, you will receive with details of lecture room. Please indicate your phone and fax numbers and email address on your registration. As you can see, one short course includes also a field trip which starts and ends at the conference place. Be equipped (see below).
- For short courses with field trip: proper clothing and supplies are needed for the outdoors, mostly in mountainous areas (e.g., mountain boots, hat, wind breaker, umbrella, sunscreen, rucksack, insect repellent). Notify that it can also be cold. Participants are advised to check local weather forecast.

Pre-Meeting Short Courses

AS1 Fluid inclusions in diagenetic environments

Ronald J. Bakker (Leoben/Austria)

Duration: 1 day: 10 September

Includes: course notes, refreshments.

Price: 100 Euro/person.

Participants: Minimum 15, Maximum 25.

Fluid inclusions in sedimentary rock provide primary information on diagenetic processes. The preservation of fluid inclusions is a well established fact in these types of rocks, and, therefore, they are direct samples of fluids that were present in pores in the geological past. The properties of these fluids can be analysed with a variety of techniques, including microthermometry and Raman spectroscopy. The composition and density of these fluids give direct information on pore fluids in sedimentary rocks. This course will focus on analytical techniques, the thermodynamics of fluid properties, and the interpretation of fluid inclusion data. Several software packages will be included in the short course to facilitate thermodynamic calculations.

AS2 Geological modelling with Gemcom Surpac™

Thomas Oberndorfer (Mine-IT Sanak-Oberndorfer GmbH, Leoben/Austria)

Field trip: Hans-Juergen Gawlick, Sigrid Missoni, Thomas Oberndorfer (all Leoben/Austria)

Duration: 1 day field trip: 09 September. 1 day short course in-house: 10 September

Includes: course notes, refreshments, lunch packet/field trip, transportation.

Price: 220 EURO/person.

Participants: Minimum 20, Maximum 40.

Gemcom Surpac™ is the world's most popular geology and mine planning software. In this short course the basic concepts and functionalities for geological modelling are presented, explained and demonstrated. The topics cover both theoretical examples and actual applications for both scientific investigations and implementations at operating mine sites.

- Modelling of surfaces and structures, including faults.
- Utilizing enriched information by integrating images in 3D space for better interpretation.
- Incorporating drill hole data for modelling, analyzing and visualization.
- Geostatistical methods.
- Mining applications.

The goal of the course is to give the participants an overview on the capabilities of geological modelling software and to provide a sound basis for evaluating the advantages of an application of these technologies in their own work field. Optionally the examples can be executed by the participants by themselves.

During the field trip (before the in house course) to one of the most famous salt deposits in the Alps we will visit the Haselgebirge Mélange and their surrounding rocks (Hallstatt Mélange) in the salt mine Altaussee in the Salzkammergut area and demonstrate how a Gemcom Surpac™ model works.

AS3 How Petrel can be a powerful tool for sedimentology?

Nacera Maache (NExT, Network of Excellence in Training a Schlumberger Company)

Duration: 1 day: 09 September

Includes: course notes, refreshments.

Price: 180 EURO/person.

Participants: Minimum 10, Maximum 12.

Most geologic work begins as a concept in the geologists head - applications like Petrel allow the geologist to easily put that concept down on paper and use Petrel to let the computer generate a proper reservoir model that honours the sedimentological concept. Petrel is a powerful tool for the construction of fully 3D representative, predictive models for different depositional environments:

This course covers fundamentals for Petrel model building workflow from stratigraphy, structural to facies modelling based on depositional environment for better reservoir characterization. Examples of reservoir modelling from continental (fluvial) to deep-water (turbidites) depositional environments will be presented. The up to date methods of 3D environment architecture and facies modelling methods will be reviewed and all the available data (cores, outcrops, seismic attributes) are implemented to generate the most realistic model. The workflow of 3D Geocellular modelling is as follows:

- Stratigraphic framework based on the sequence stratigraphic analysis which captures the vertical evolution of the reservoirs and honours the sedimentary cycles.
- 3D structural grid where the orientation of the grid is a function of the sand bodies orientation.
- Facies modelling offers a range of modelling methods which integrate the available data such as cores, outcrops analogs, seismic attributes. Geological conceptual models based on all data provide a general scheme capturing the depositional process and contribute to the understanding of the reservoir complexity by generating a 3D geological model using different statistical approaches:
 - 3D facies modelling using object-based modelling can be approached using object-based algorithm modelling, where facies is distributed in a variety of predefined geological shapes, including fluvial channels with levees, turbidite lobes and channels.
 - Pixel-based algorithm simulation which doesn't reproduce complex geometries.
 - Multi-point (MPS) facies simulation is based on training images guided by conceptual models built from cores and analogs data.
 - The stochastic method (TGS) is very useful for modelling environments where there is a natural transition through a sequence of facies such as carbonate platform and progradational fluvial sequences. Other methods will be reviewed and examples presented.

AS4 Petrophysical modelling

Karl Millahn (Leoben/Austria)

Duration: 1 day: 10 September

Includes: course notes, refreshments.

Price: 100 EURO/person.

Participants: Minimum 20, Maximum 30.

One of the steps in generating a (e.g., 3D hydrocarbon) reservoir model involves populating the structural model with relevant properties (e.g., permeability, fluid saturation). Reliable information is available only at a few well locations; other data like reflection seismic sections or volumes carry information indirectly linked to the properties of interest. Statistical techniques are employed to combine all sources of information in a process called 'Petrophysical Modelling'.

The workshop aims at lifting the mysterious black cloth shrouding the black-box-approach and emphasizing the solid physical and statistical background.

Post-Meeting Short Courses

BS1 Magnetic stratigraphy

Robert Scholger, Elisabeth Schnepf (Leoben/Austria)

Duration: 1 day short course in-house: 14 September. 1 day field trip: 15 September

Includes: course notes, refreshments, lunch packet/field trip, transportation.

Price: 220 EURO/person.

Participants: Minimum 20, Maximum 40.

Fundamentals of magnetic stratigraphy and geochronological applications of palaeomagnetic methods (chronometric calibration of biostratigraphical zones, correlation of marine and terrestrial sequences, climate change). Topics include:

- The Earth's Magnetic Field.
- Magnetic Properties of Rocks and Rock Magnetic Stratigraphy.
- Magnetic Polarity Stratigraphy and Geomagnetic Polarity Time Scale.
- Relative Palaeointensity and Archaeomagnetic Dating.

During the excursion, sampling techniques and on-site measurements will be demonstrated in the Cretaceous/Palaeogene boundary sections at Gams (Austria).

BS2 Tracers in organic geochemistry - biomarkers and stable isotopes

Achim Bechtel (Leoben/Austria), Reinhard Gratzner (Leoben/Austria), Wilhelm Puettmann (Frankfurt a.M./Germany)

Duration: 1 day: 14 September

Includes: course notes, refreshments.

Price: 100 Euro/person.

Participants: Minimum: 15, Maximum: 25.

Participants will get an introduction to techniques of biomarker and light stable isotope analyses in hydrocarbon systems. Examples of their applications will include biogeochemistry, petroleum geochemistry and ecology. How can stable isotopes help to identify the precursors and fate of biomolecules. Their role in palaeoclimatic reconstructions will also be discussed. The course will cover:

- Principles of biomarker and stable isotope (C, O, H) analyses.
- Analytical methods (GC, GC-MS, GC-ir(C, H)-MS).
- Biological precursor molecules.
- Biomarkers and C-isotopes in petroleum geochemistry.
- Palaeoclimatology, palaeoecology.
- Environmental geochemistry.

BS3 The multiphase flow behaviour of naturally fractured reservoirs

Stephan K. Matthaei (Leoben/Austria)

Duration: 3 days: 14-16 September

Includes: course notes, refreshments.

Price: 300 Euro/person.

Participants: Minimum: 15, Maximum: 25.

Subject is the state-of-the-art in characterisation, modelling and simulation of Naturally Fractured Reservoirs (NFRs), their properties including constitutive relationships for matrix and fracture multiphase flow as well as fracture-matrix transfer and the variation of flow properties with scale. Also covered will be flow-based upscaling of permeability and relative permeability in view of emergent flow structures and instabilities such as fracture-assisted viscous fingering. This analysis will be supported by findings from cm- to hm-scale physical experiments and numerical simulations. Observations and dynamic data are used to address NFR behaviour on the field-scale.

The information shared in this course underpins a novel NFR characterisation and reservoir simulation workflow that begins with statistical fracture characterisation in the subsurface, including geomechanical techniques for the prediction of fracture geometrical arrangement, connectivity, and aperture taking into account the in situ stress state. It will be shown how the latter can be inferred from the lithostatic load, borehole breakouts and drilling-induced tensile fractures. The discussed workflow progress with the computation of grid-block scale fracture - matrix ensemble properties and concludes with field-scale simulation. As an inverse approach, the course also tries to establish what dynamic data reveal about the role of fractures or faults in any particular NFR and how these diagnostics should be used to guide data collection, history matching, and predictive simulations.

Many of the conclusions drawn in this course rest on results from Discrete Fracture and (rock)-Matrix (DFM) simulations carried out on unstructured hybrid FEM-FVM scale models. Therefore, the foundations of the DFM and simplifications made / associated assumptions are explained as well. Subsequently, the DFM is compared and contrasted with existing fracture modelling and flow simulation techniques, including an analysis and discussion of the pro's and con's of field-scale dual porosity modelling.

BS4 Geological modelling for coal/stratified deposits with Gemcom Minex™

Gemcom Technical Presenter, TBC

Duration: 1 day: 14 September

Includes: course notes, refreshments.

Price: 125 Euro/person.

Participants: Minimum: 20, Maximum: 40.

Gemcom Minex™ provides the unique and specialised geology and mine planning tools for coal and other stratified deposits, ensuring resources are evaluated accurately and mined efficiently. This short course will highlight the main features, as well as a demonstration of the product with real-life case study information. The course will show you the benefits of Minex, which include:

- Geological database and seam correlation.
- Geological modelling of faulted multiseam coal deposits.
- Open pit optimisation.
- Mine planning / open pit and underground applications.
- Reporting resources and plans.

This course is designed as a strong introduction to Minex for those without prior experience of the software.

LEISURE OPTIONS

Schladming is very alive and has many interesting places in its surroundings to visit (for ideas of what to do in Schladming-Rohrmoos | Schladming-Dachstein log on the website: www.sedimentologists/ims-2012). Our advisors of the Tourist Office will arrange a wide selection of culture and site-seeing spots, but there will be abundant of local offers for each individual. Nearby and easy to reach are: e.g., the cities of Salzburg, Vienna, the charming small town Bad Ischl as cultural centre of the Salzkammergut, conquer for yourself the historical jewels of castles and fortress in the nearby vicinity, or explore the Salzkammergut area with its crystal-clear lakes, the subsurface salt-mines, the glaciated Mount Grossglockner as highest mountain of Austria, or discover the Hallstatt Dachstein Salzkammergut UNESCO World Heritage Sites.

EXHIBITION & SPONSORSHIP

The 29th IAS Meeting provides an ideal opportunity for industry, scientific publishers, geological surveys, research organisations, professional societies and others to engage with the global sedimentological community. A range of sponsorship and exhibition opportunities, to suit varying needs and budgets, have been designed to facilitate optimal access to this meeting.

- Place for exhibition.
- Offer your new technologies, products and services.
- Advertisements in the Programme/Abstract and Field Trip volumes.
- Place your logo on the IAS Meeting website, subsequent circulars, in the Programme/Abstract and Field Trip volumes.
- Organize special meetings within the context of the conference.
- To participate with own contributions.
- To take part in the organized field trips and short courses.

And other things more.

Exhibitor staff registration package

The featured interdisciplinary **exhibition** will occupy the foyer of the ground floor and parts of the plenary hall (red convention room) of Congress-Schladming, the heart of this Meeting. The exhibition space will be built around a central meeting and eating area.

The price for each exhibition is 2000+ EURO.

Every exhibition includes: Exhibition space is available as raw space. Each space has around 10 m² and comes equipped with one table, two chairs and basic power. This package is for staff whose primary role is working at your exhibition space during the congress. Name badge, Meeting satchel, Internet access, Welcome Reception, access to the Scientific Programme, and refreshments during the Meeting for one person (**1 person**) are included. All other representatives are required to register as full 29th IAS Meeting participant. This package does not include access to any of the short courses and field trips without full payment.

If you need more space or want to build up your own equipment feel free to contact the organizers. We try to make all possible.

Sponsorship

Sponsorship of such a conference is very rewarding, besides the immediate effects to meet friends and other people for discussion or to exchange data, and to present yourself, the long-term effects for a sponsor are equally important. Such a big conference will stimulate common and interdisciplinary research, give the chance to start new cooperation's, and will make the sponsors potential better known to the international community.

A variety of excellent sponsorship and advertising opportunities are available at the 29th IAS Meeting. A prospectus can be downloaded (www.sedimentologists.org/ims-2012), more details are available by contacting the chairpersons: ias2012@unileoben.ac.at

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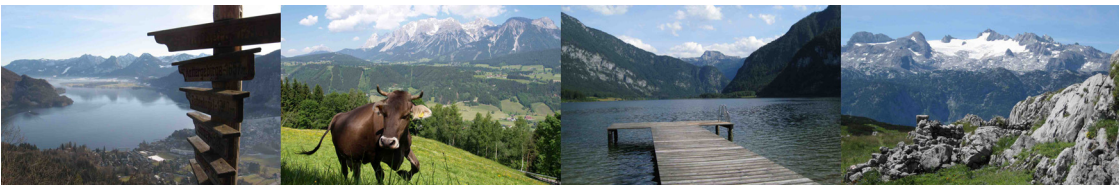
Short Courses



NEXT

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CALENDAR

December 2011: Standard registration commence and abstract submissions open.

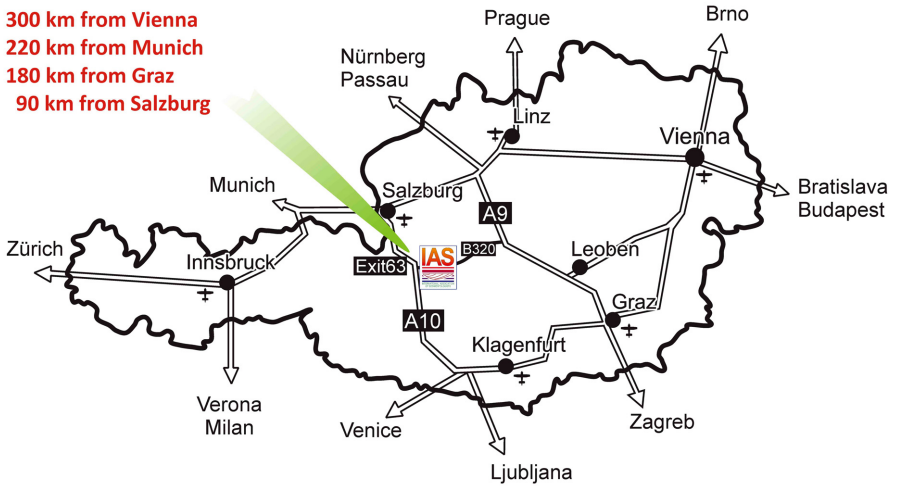
30 April 2012: Deadline for submission of abstracts. Deadline for payment of registration (meeting, field trips, short courses) with no extra charge.

1 May 2012: Late registration commence.

July 2012: 3rd Circular: PROGRAMME

Schladming, Austria

300 km from Vienna
 220 km from Munich
 180 km from Graz
 90 km from Salzburg



TIME SCHEDULE

29th IAS Meeting of Sedimentology

Schladming, Austria: 10th - 13th September 2012

