

IAS



INTERNATIONAL ASSOCIATION
OF SEDIMENTOLOGISTS

NEWSLETTER

N°176 October 2001

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CARBONATE CONFERENCE IN RUSSIA

The Carbonate section of the Russian Lithological (Sedimentological) Committee and Institute of Geology of the Komi Scientific Centre of the Russian Academy of Science organised the all-Russian Lithological Conference – the first conference devoted to carbonate sediments after more than ten years of hiatus.

This conference about the lithology and the oil/gas bearing of carbonate sediments was held from June 5th to 7th, 2001, in Syktyvkar, Komi Republic. The conference was convened by Academician N. Yushkin (Institute of Geology) and Prof. V. Kuznetsov (Russian State University of Oil and Gas).

92 participants from 34 universities, scientific and industry organisations, including students, discussed 48 oral and 23 poster presentations. The main topics of the conference were:

- Sedimentology and geochemistry of carbonate sediments;
- Cyclicity and sequence stratigraphy of carbonate deposits;
- The evolution of carbonate accumulation in Earth history;
- Problems of reef formation;
- Oil and gas bearing of carbonate sediments.

Furthermore, two important problems were discussed informally:

- Principles and scheme of classification of carbonate rocks;
- Geological language and terms used in carbonate sedimentology.

It was noted that it is necessary to revisit a number of records of carbonate strata in Russia for the purpose of identifying non-tropical and relatively deep-water sediments, to study composition and architecture of carbonate bodies and to compare these with the ones of siliciclastic deposits, and to study the role of life and organic matter in carbonate sedimentation and dolomitization.

Post-conference fieldtrips were arranged from June 8th to 12th, in order to look at the Devonian sections of the Timan-Pechora region (leader: Dr. N. Belyaeva, Institute of Geology).

The Lithological Committee and the Institute of Geology are thanked for having initiated a very successful and well-organised conference.

*Dr. V. Kuznetsov,
Moscow,
Russian Federation.*

OBSERVER'S REPORT ON THE 21ST IAS MEETING OF SEDIMENTOLOGY, DAVOS, SWITZERLAND

3 – 5 September, 2001

(Synthesis presented at the end of the Meeting)

Having enjoyed this IAS Meeting over the last 6 days I want to give you my personal thoughts on Davos 2001 and some comments on IAS Meetings in general.

With regard to this meeting we have some data on attendance: 467 sedimentologists have participated from 52 countries. This makes it a large and truly international meeting which in my mind reaches the expectations of an IAS Regional Meeting. Also we have had the choice of 8 fieldtrips selected from some of Europe's most spectacular geology. Such fieldtrips, I believe, are a very important part of these meetings. There is little to beat the quality of discussion generated from bringing together sedimentologists of such diverse interests and backgrounds in front of rock successions at these meetings. In addition, fieldtrips play an important role in conference attendance figures as they attract sedimentologists from other regions who wish to see classic sections or to present new research results. We had both of these in the fieldtrip I attended looking at pelagic

and shelf successions in the Jurassic of the Southern Alps expertly organised around most of the thunderstorms by Dan Bernoulli, Peter Baumgartner, and Luca Matire.

The conference in Davos has benefited from what must be regarded as a near perfect setting; this *Kongresszentrum* and its facilities, the nearby hotels and restaurants, spectacular mountain scenery, and all of this at out of season prices. Davos 2001 will be a hard act to follow – except, that is, for the weather!

I liked the template of the meeting, a mix of different styles of presentation: keynotes to start up or round up sessions, short talks and an astonishing number (over 250) of posters. Beer and posters for the afternoon session is a great way to round up the day. We've had to contend with five parallel sessions in the mornings, possibly a record for IAS Regional Meetings, but the exercise is good for you dashing from hall to hall.

What is clear to me is that there is a thriving and sustaining interna-

tional sedimentological community. I say sustaining because we have had 126 student registrations which, together with all the student assistants, probably rounds up to a total of about 150. There is a young, enthusiastic and talented student population attending and I have particularly enjoyed listening to their enthusiastic presentations and talking to them about their research projects from around the world.

What about the scientific content of the meeting? André Strasser posed the question in his opening remarks as to whether we are hearing the state of the art and where is the subject going? My view is that sedimentology is a rapidly expanding science so that compared with say, 5 years ago, there is a much greater breadth in the subject. The mainstream continues to be the analysis of facies distributions and the controls on depositional sequences and stratigraphies, and on diagenetic products and processes. But these are probed with a greater range of tools, which have been applied and developed, particularly in collaboration with colleagues from geophysics, mathematics and geochemistry. The new directions presented here from my perspective (shallow-water carbonate sedimentology) is the integration of climatic and oceanographic processes to our understanding of the sedimentary record and the application of numerical modelling to unravel the control of the evolution of sedimentary systems.

Are there areas under-represented at this meeting? The most obvious gaps to my mind are in Environmental and Industrial Sedimentology. IAS president Maurice Tucker reminded us of the specialist meeting on Environmental Sedimentology in Hong Kong next year; but if IAS is to continue as the umbrella organisation for sedimentology it has to be proactive in bringing such new areas into the Regional Meetings as well. This can be done by inviting keynotes and promoting themes and symposia. Otherwise we all loose out if those working in such new diversified areas are not involved in annual meetings. I also mention Industrial Sedimentology and in particular that related to the hydrocarbon industry (the major employers of sedimentologists in the UK). I haven't seen much evidence of seismic data and nothing on 3-D seismic data or other forms of 3-D visualisation which provide such superb insights into medium to large scale stratigraphic and sedimentological relations and interactions. In this area of investigation it is industry, and not the universities, that hold the best data and I have seen little evidence of university/industry collaboration at this meeting. We had no oil industry sponsors for the meeting. Apart from the benefit of undertaking research on these data it also raises the question of where all the young sedimentologists at this meeting are going to get jobs? These comments are coming from a UK perspective where the situation is dif-

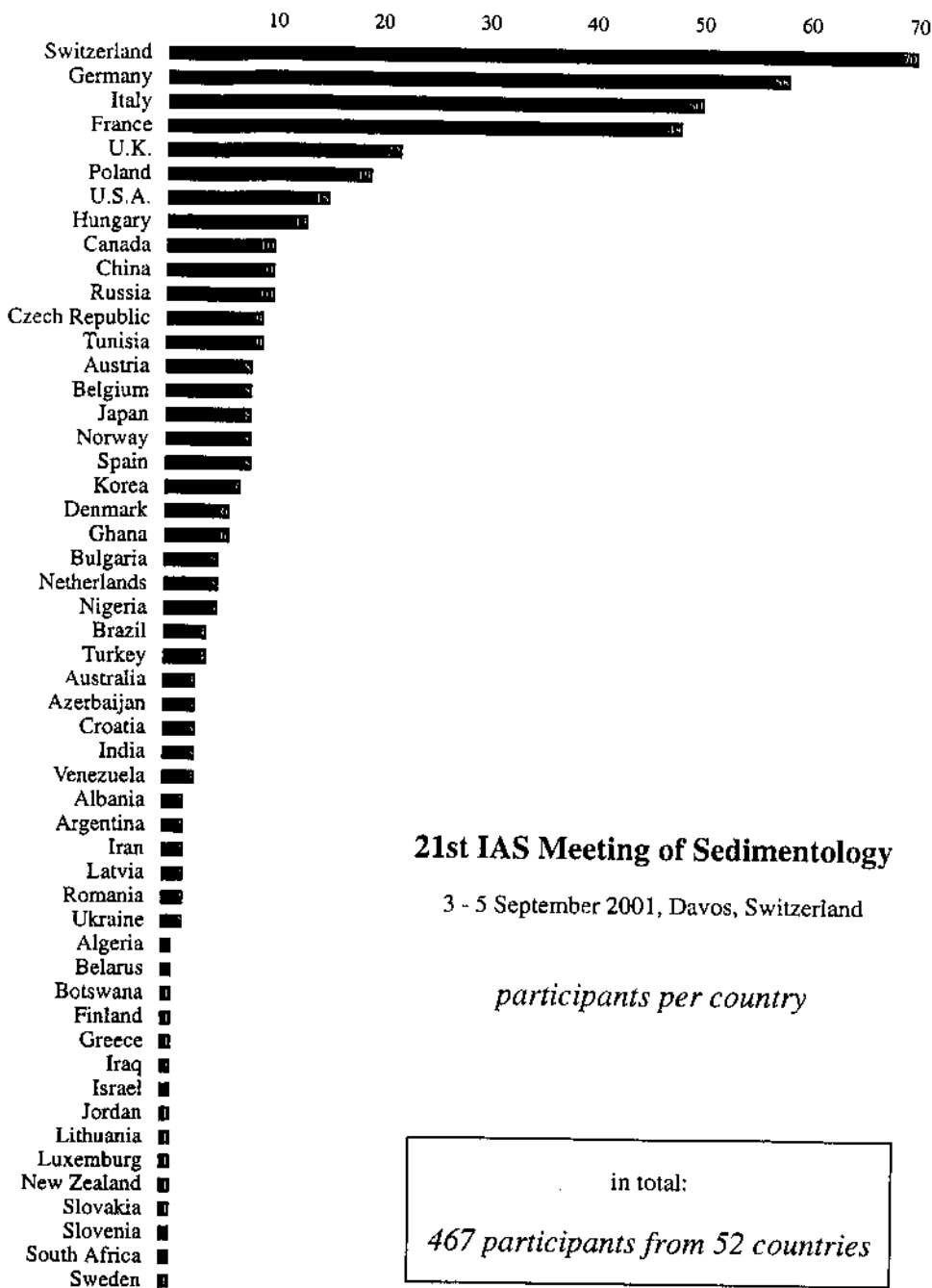
ferent and there is more integration of industrial/university research.

What about IAS Meetings in general? The aims of the International Sedimentological Congresses are, I believe, clear to most, but what about the Regional Meetings? Why are they called Regional Meetings and why are they nearly always held in Europe? I appreciate that the IAS has a strong European base but we are an international organisation, overseas travel becomes cheaper by the year, and I can envisage benefits of holding such annual meetings further afield than Europe. From my experience of working in the Middle and Far East and South America I can envisage countries/institutions that might well be able to host an annual meeting but would not wish to host the much larger ISC. I know that some of these countries hold their own sedimentological conferences but I would only attend these if I were intimately involved in projects in those countries. I can see benefits all round, and in particular for young sedimentologists from non-European countries of attending a meeting such as this. I hope the Bureau will consider this and that the many sedimentologists from countries to the east, southeast, south and southwest of Europe (North America

is already served with SEPM Meetings) consider approaching the IAS about hosting meetings. But I warn you that a high standard of planning and organisation is expected of you.

I am coming to a conclusion now, as I do not want to keep you from your final round of beers and posters but I am sure you would wish me to use this opportunity to thank all those who have worked so hard to make this such an efficiently run, successful and enjoyable meeting. In particular I wish to thank the student assistants from Geneva, Berne, Lausanne and Zurich for helping with the fieldtrips and projection facilities at the meeting; Uli Wortmann and Hanspeter Funk for the website, abstract volume and poster displays; Haruko Hartmann and her team for running the registration desk; and Judith McKenzie, André Strasser and Helmi Weissert for overseeing and seeing through the organisation of the meeting.

*Dan Bosence,
Royal Holloway,
University of London,
U.K.*



21st IAS Meeting of Sedimentology

3 - 5 September 2001, Davos, Switzerland

participants per country

in total:

467 participants from 52 countries

IAS SPECIAL PUBLICATION 31: SEDIMENT TRANSPORT AND DEPOSITION BY PARTICULATE GRAVITY CURRENTS

(edited by Jeffrey Peakall, Bill McCaffrey and Ben Kneller)

Particulate gravity currents (PGCs) represent an emerging field of study that has diverse applications such as climate modeling and oil recovery. PGCs are especially difficult to describe owing to the importance of large-number particle dynamics and their interactions with turbulent flow fields – both poorly understood concepts. As a result, workers at the School of Earth Sciences at Leeds University, UK (an internationally renowned center for PGC research) assembled over 100 scientists and engineers from around the world in a variety of fields to discuss these complexities. The conference was exceptional, being one of the few conferences where geologists, geophysicists and engineers all engaged one another in unencumbered discussions and brainstorming sessions.

IAS Special Publication Number 31 is the result of the conference "*Sediment transport and deposition by particulate gravity currents*" held in Leeds, UK in September of 1998. The conference was sponsored by SEPM, BSRG, the Geological Society of London and a consortium of petroleum companies (Amoco,

ARCO, BHP, Chevron, Conoco and Elf). It has taken some time to assimilate the results for publication, but most of the articles within it remain state-of-the-art.

The volume is divided into four sections based upon approach (theoretical, theoretical-experimental, experimental, and field-based), rather than topic, to facilitate bridging disciplinary gaps. It begins with the theoretical section, which presents work primarily regarding large granular flows. Beginning with an exhaustive summary of the work of Tamotsu Takahashi, the theoretical section continues with interesting discussions of the various conceptual issues associated with the description of rapid granular flows.

The theoretical section is followed by a hybrid theoretical-experimental section. Articles within this section range from the most dilute to the most concentrated particulate flows imaginable. The articles represent new, integrative approaches to solving not only the dynamical puzzles, but address predictive issues as well. Defining the section is the article by McElwaine and Nishimura,

which describes their massive ping-pong-ball experiments at a ski resort in Japan. The article and topic appears comical, but the experimental results and accompanying analysis yield new data to the ongoing effort to describe large ($>> m^3$) granular flows from a more fundamental perspective.

The experimental section concentrates exclusively on dilute flows, but it does so with remarkable breadth. Three of the four contributions are from Leeds University and reflect the innovative work being done there. Particularly interesting is the paper by Henry Pantin on laboratory experiments of autosuspension. Laboratory confirmation of autosuspension previously had not been achieved, despite numerous attempts. The results and approach are extremely intriguing and will certainly be incorporated into many future studies.

The volume concludes with a range of articles taken from field observations. Focused primarily on volcanoclastic flows, the field measurements are nonetheless wide-ranging in terms of flow type. Preservation and stratigraphy, which was not discussed much in the rest of the volume, is the focus of these last few articles. The research in this section is interesting and sound, but it appears to be disconnected with the theoretical and experimental research described in the other sections.

The strength of the manuscript is clearly the 'modeling' component. Modeling sediment gravity flows (whether numerically or in the laboratory) is a notoriously difficult problem, typically involving many simplifications of multi-phase fluid mechanics. Special Publication 31 presents many novel approaches, which are a refreshing change from the normal parameter-fitting exercise often found in the literature. The techniques employed (like the auto-suspension work of Henry Pantin and the ping-pong ball experiments of McElwaine and Nishimura) exhibit an unexpected creativity in what can sometimes be a dry, predictable subject. The results from these approaches improve not only traditional PGC models, but they also increase our general understanding of the phenomenon.

Ironically, considering the editorial staff was comprised primarily of field geologists, the primary weakness of the manuscript is the tie between the field studies and the modeling. The final field section seems like an add-on. Some of the modeling articles individually attempt to relate to natural-scale flows and utilize field observations, but collectively the division between modeler and field geologist is stark. Further reinforcing the division between lab and field studies is the organization of the volume. Despite that the volume attempts to categorize the work according to approach rather than topic, the disciplinary boundaries within the document are still visible.

However, I appreciate the effort and hope it will be tried again in the future.

In sum, Peakall et al. have assembled a volume that contains some of the most original research relating to PGC dynamics in the last ten years. The scope of the volume should allow geologists, geophysicists and engineers to explore new problems and develop new and innovative strategies for their solution. It is well worth the purchase price.

*Jeff Parsons,
University of Washington, Seattle,
U.S.A.*

IAS Special Publication No. 31

**Sediment Transport and Deposition
by Particulate Gravity Currents**

*J. Peakall, B. McCaffrey, & B. Kneller
(eds.)*

published by Blackwell Science

Paperback, 320 pages, 222 illustrations

IAS member price:

42 Euros, 275.50 French Francs

ECONOMIC APPLICATIONS OF SEDIMENTOLOGY CONFERENCE

28th February – 1st March, 2002

Geological Society, Burlington House, London, U.K.

Co-convenors:

Jon Noad (Shell International) and Richard Teeuw (University of Hertfordshire)

This conference will explore the economic applications of sedimentology in the Hydrocarbon and Mining Industries. Run over two days at the Geological Society, Burlington House, around 120 delegates are expected to attend. The conference will be split, with one day concentrating on the oil and gas industry, and the second on mineral and coal extraction. Sedimentological themes to be addressed over the two days will include exploration and prediction, correlation, reservoir and ore body architecture, and input to 3-D modelling. Keynote speakers will be drawn from both industry and academia, and this balance should be maintained with the other speakers. Dedicated poster sessions will also be held on each of the days. A (reviewed) Geological Society Special Publication is planned.

Contact:

Jon Noad (jon.noad@gec.shell.com) regarding the Hydrocarbon Day

Richard Teeuw (r.m.teeuw@herts.ac.uk) regarding the Mining Day

CALENDAR

2ND NATIONAL CHINESE SEDIMENTARY CONFERENCE

October 16-19, 2001

CHINA (Wuhan)

Contact: Wanghua, He Jiaying, or Zhangli,
China University of Geoscience,
Wuhan, China.

Tel: +86 27 87 48 13 65

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E-mail: wanghua1@cug.edu.cn

Web-page:

[http://www.cug.edu.cn/meeting/cjx/
index.html](http://www.cug.edu.cn/meeting/cjx/index.html)

IMAGE ANALYSIS, SEDIMENTS AND PALEOENVIRONMENTS

November 8-10, 2001

U.S.A. (Amherst, Massachusetts)

Contact: Pierre Francus,

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[http://www.geo.umass.edu/climate/imagewks.
html](http://www.geo.umass.edu/climate/imagewks.html)

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CONTINENTAL SHELVES DURING THE LAST GLACIAL CYCLE

IGCP Program 464

October 25-28, 2001

HONG KONG

Contact: Francesco L. Chiocci,

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Web-page:

<http://tetide.geo.uniroma1.it/igcp464>

EIGHTH FRENCH CONGRESS OF SEDIMENTOLOGY

November 12-14, 2001

FRANCE (Orléans)

Contact: Melle Thi-Ngeune Lo,

ISTO, 1A rue de la Férollerie,

45071 Orléans cedex 2, France.

Tel: +33 (0)238 25 53 96

Fax: +33 (0)238 63 64 88

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Web-page: [http://www.cnrs-](http://www.cnrs-orleans.fr/~webisto/)

[orleans.fr/~webisto/](http://www.cnrs-orleans.fr/~webisto/)

**IAS/SEPM ENVIRONMENTAL
SEDIMENTOLOGY WORKSHOP:
CONTINENTAL SHELVES -
PROCESSES, RECORD, UTILIZATION
AND MANAGEMENT**

January 7-10, 2002

HONG KONG

Contact: Dr. Wyss Yim,
Department of Earth Sciences,
The University of Hong Kong, Hong Kong.
E-mail: wwsyim@hku.hk

**ECONOMIC APPLICATIONS OF
SEDIMENTOLOGY**

February 28 - March 1, 2002

U.K. (London)

Geological Society, Burlington House
Contact: Jon Noad (jon.noad@gec.shell.com)
or Richard Teeuw (r.m.teeuw@herts.ac.uk)

**ANCIENT AND MODERN COASTAL
PLAIN DEPOSITIONAL
ENVIRONMENTS**

**Aquifer heterogeneity and environ-
mental implications**

SEPM/IAS Research Conference

March 24-27, 2002

U.S.A. (Charleston, South Carolina)

Contact: Mary K. Harris,
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River Company, P.O. Box 616,
Aiken, SC 29808, U.S.A.
Tel: +1 803 725 41 84
E-mail: mary.harris@srs.gov

**NINTH ARGENTINIAN MEETING
OF SEDIMENTOLOGY**

May 21-24, 2002

ARGENTINA (Córdoba)

Contact: Ricardo A. Astini,
Estratigrafía y Geología Histórica,
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E-mail: IXRAS2002@com.uncor.edu
Web-page: www.sedimentologia.org.ar

SEDIMENT 2002

May 29-31, 2002

GERMANY (Darmstadt)

Contact: Rainer Petschick,
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agoetz@geo.tu-darmstadt.de

Web-page: <http://sediment2002.geologie.uni-frankfurt.de>

**16TH INTERNATIONAL
SEDIMENTOLOGICAL CONGRESS**

July 7-12, 2002

SOUTH AFRICA (Auckland Park, Gauteng)

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Fax: +27 11 489 23 09

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Web-page:

<http://general.rau.ac.za/geology/IAS2002>

**6TH INTERNATIONAL SYMPOSIUM
ON THE JURASSIC SYSTEM**

**A meeting of the IUGS International
Subcommission on Jurassic Stratigraphy**
September 12-22, 2002

ITALY (Palermo)

Contact: Luca Martire
Dipartimento di Scienze della Terra
Via Accademia delle Scienze 5

10123 Torino, Italy

Fax: +39 011 54 17 55

E-mail: martire@dst.unito.it

Web-page: www.dst.unito.it/6thISJS

**6TH INTERNATIONAL CONGRESS
ON RUDISTS**

September 16-18, 2002

CROATIA (Pula - Istria)

Contact: Mrs. Alisa Martek and Dr. Ivo
Velic,

Institute of Geology,
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HR-10000 Zagreb, Croatia.

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**THIRD FRENCH SYMPOSIUM
ON STRATIGRAPHY**

July 8-10, 2002

FRANCE (Lyon)

Contact: Christian Gaillard, Pierre Hantz-
pergue,

Université Claude Bernard Lyon 1,
UFR Sciences de la Terre,
Géode - 2, rue Raphaël Dubois,
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E-mail: strati2002@univ-lyon1.fr

Web-page: <http://www.univ-lyon1.fr/strati2002>

**6TH INTERNATIONAL CONFERENCE
LITTORAL 2002**

September 22-26, 2002

PORTUGAL (Porto)

Contact: G. Soares de Carvalho,
Instituto de Hidraulica e Recursos Hidricos,
University of Porto, 4200-464 Porto, Portu-
gal

Tel: +351 22 508 19 07

Fax: +351 22 508 19 52

E-mail: fpinto@fe.up.pt

**THIRD INTERNATIONAL
LIMNOGEOLOGY CONGRESS**

March 29 – April 2, 2003

U.S.A. (Tucson, Arizona)

Contact: Andrew Cohen, Dept. of Geo-
sciences,

University of Arizona, Tucson, AZ, U.S.A..

Tel: +1 520 621 46 91

Fax: +1 520 621 26 72

E-mail: acohen@geo.arizona.edu

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full or partial IAS sponsorship