

The Newsletter of the International Association of Sedimentologists

Issue 11, 2021



Dear IAS Members,

Welcome to the penultimate issue of the IAS Newsletter for 2021.

The nominations for **IAS Awards** are imminent – closing date is **1st December** – and we are seeking nominations for the Sorby Medal, Johannes Walther Award, Early-Career Scientist Award and Sun Shu Prizes (x2). So, if you have a colleague who you think the IAS should recognise, please do put their name forward for consideration by the selection committees. The process is very quick and simple.

Applications are now open for **IAS Postgraduate, Postdoctoral and Institutional Grants** as well as for the Judith McKenzie Field Work Award. The closing date for these is **31st March 2022** but you may submit an application as soon as you wish.

For **postgraduate student members** we draw your attention to the **2022 IAS Summer School**, which will be an unrivalled opportunity to study modern carbonate sediments and their lithified analogues in the fantastic setting of Eleuthera Island, Bahamas. The application deadline is **15th January**.

Finally, please remember to **renew your annual membership** so you can continue to benefit from all that IAS has to offer you, including high-impact journals, conferences, grants and more. It is quick and easy, and the rates compare very favourably with other societies.

Stephen Lokier, *General Secretary*

The 21st International Sedimentological Congress, Beijing 2022



The 21st International Sedimentological Congress will be held in Beijing between the 22nd and 26th August 2022 – get the dates into your diary. [Visit the website for full details.](#)

This promises to be a truly exceptional meeting with a plethora of exciting, once-in-a-lifetime fieldtrips on offer.

Notification of General Assembly - 2021

The General Assembly of the IAS will take place on December the 10th 2021 at 2pm CET. Due to ongoing restrictions on travel, the meeting shall be held online. The agenda has been distributed to all Members via email. Procedures for attending the General Assembly and for voting will be sent in the next few days.

Final call for nominations for the:

[IAS Sorby Medal](#)

[IAS Johannes Walther Award](#)

[IAS Early-Career Scientist Award](#)

[IAS Sun Shu Prizes](#)

The Sorby Medal is the highest award of the International Association of Sedimentologists. It is awarded to scientists of eminent distinction in sedimentology. The Sorby Medal is awarded once every 4 years, at the occasion of the International Sedimentological Congress (ISC).



Or Bialik, winner of the 2020 Early Career Scientist Award

The IAS Early-Career Scientist Award is awarded to recognise contributions and potential of outstanding early-career scientists working in any area of sedimentology. The award is also given once every 2 years.

Emmanuelle Vennin, recipient of the 2020 Johannes Walther Award



Huaichun Wu, Winner of the Sun Shu Prize China, 2020

Alex Brasier, Winner of the Sun Shu Prize International, 2020

The IAS Sun Shu Prizes are awarded to recognise outstanding work in the field of sedimentology. The prizes are awarded every two years to a Chinese scientist (SUN SHU Prize China) and an international scientist (SUN SHU Prize International).

Application deadline for all awards is 1st December 2021 24h00 Brussels Time (CEST, UTC+2).

Full details of all prizes, together with nomination guidelines can be found [here](#).

First call – Applications for IAS Post-Doctoral Research Grants (Spring 2022 Session)

IAS Post-Doctoral Research Grants are intended as a seed to assist Early-Career post-doctoral researchers in either establishing a proof of concept, in order to support applications to national research funding bodies, or to fund areas of a project that were not included in the original project scope.

Up to 4 grants, each to a maximum of €2,500, are awarded twice per year to Early Career IAS members.

The application requires submission of a research proposal with budget and CV

(template provided on the [submission webpage](#), and a letter of support from the researcher's supervisor, line manager or Head of School. More details about the application procedure can be found on your membership profile.



Applications must be submitted via the [IAS website](#). Application deadline for the Spring 2022 Session is **31st March 24h00 Brussels Time (CET, UTC+1)**.

Eligibility:

- Applicants must be full members of the IAS and have secured their Ph.D. within the previous 7 years.
- Applicants can only benefit from a Post-Doctoral grant on one occasion.

First call – Applications for the Judith McKenzie Field Work Award (Spring 2022 Session)

The **Judith McKenzie Field Work Award** aims to promote sedimentological field observations for the newest generation of Earth Scientists – MSc Students.

Up to 5 awards of €300 each, will be awarded twice per year to IAS student members. Since the award is only available for MSc students, proof of student status will be required. The awardee shall also receive a one-year IAS student membership, upon submission of their MSc thesis.



Applicants should apply for the Judith McKenzie Field Work Award via the [IAS website here](#). The application requires submission of a grant proposal (written by the student) with budget and CV (template provided on the submission webpage), and a signed letter of recommendation from the student's supervisor. Applications must be submitted via the [IAS website](#). Application deadline for the Spring 2022 Session is **31st March 24h00 Brussels Time (CET, UTC+1)**.

First call – Applications for Institutional Grants (Spring 2022 Session)

Twice a year, IAS awards an [Institutional Grant](#) of maximum 10,000 Euro, which is intended to support capacity building initiatives in less developed countries (LDCs). Grants will allow earth science departments in LDCs to acquire durable sedimentological equipment for teaching and research, or tools that can be used by all geology students. The grant application should thus clearly demonstrate how the grant will increase the recipient's capacity to teach sedimentology at undergraduate level in a sustainable way.

Applications must be submitted via the [IAS website](#). Application deadline for the Spring 2022 Session is **31st March 24h00 Brussels Time (CET, UTC+1)**.

More information about the Institutional Grant Scheme and guidelines on how to apply can be found on your membership profile.



First call – Applications for Post-Graduate Research Grants (Spring 2022 Session)

Up to [10 research grants](#), each to a maximum of €1,000, are awarded twice a year to **IAS Post-Graduate Student Members**. This grant scheme is designed to support PhD students in their studies and research. Post-Graduate Research Grants can be used to (co-)finance fieldwork, acquisition and analysis of data, visits to other institutes to use specialized facilities, etc.

Applications must be submitted via the [IAS website](#). Application deadline for the Spring 2022 Session is **31st March 24h00 Brussels Time (CET, UTC+1)**.

More information about the Post-Graduate Grant Scheme and guidelines on how to apply can be found on your membership profile.



IAS Grant Reports

You can read recent and past Grant Reports from IAS members who have benefited from [Post-Doctoral](#) or [Post-Graduate](#) grants [here](#).

POSTGRADUATE REPORT Mario Matasovic — Provenance and Diagenesis of the Upper Miocene Sandstones from the South-Western Part of the Pannonian Basin System, Croatia Posted 22 June 2020 READ REPORT	POSTGRADUATE REPORT Emma Graf — Source to sink: documenting the journey of landslide sediment following the 2015 Gorkha (Nepal) earthquake Posted 22 June 2020 READ REPORT
POSTGRADUATE REPORT Pawel Godlewski — Application of macroscopic and microscopic porosities for interpretation of submarine gravity flows characteristics in deep-marine Cergowa Beds (oligocene), Outer/Flysch Carpathians of Poland and Slovakia Posted 25 May 2020 READ REPORT	POSTGRADUATE REPORT Dawei Liu — Reconstructing the provenance of Glacial Lake Outburst Floods (GLOFs) in Chilean Patagonia Using Sr and Nd Isotopes Posted 25 May 2020 READ REPORT
POSTGRADUATE REPORT Hamad Rabhi — Diagenetic studies of the Samana Suk Formation (middle Jurassic) in the Hazara basin and its adjoining areas: implications of fluid flow evolution on reservoir heterogeneities Posted 25 May 2020 READ REPORT	POSTGRADUATE REPORT Luxing Dou — Paleosols in Outcrops of Red Beds Formed in the Late Cretaceous Mid-latitude Terrestrial Climate Posted 3 April 2020 READ REPORT

IAS Summer School - 2022



ATTENTION PHD STUDENTS !!

Are you interested in learning
more about **carbonate sedimentology?**

Do you want to visit an island that takes you from water,
to sediment formation, to lithified rock?

Then check out the **IAS international summer school** in
Eleuthera, Bahamas from May 7-14, 2022

microbial precipitation



oid shoals



karst features



aeolianite complexes



speleothems



APPLICATIONS DUE: JANUARY 15, 2021

To apply, sign into your student member profile on the IAS website, then visit
<https://www.sedimentologists.org/me/summer-school>
(only visible for student members)

email pswart@rsmas.miami.edu or chelsea.pederson@rub.de with any questions

*All participants must be vaccinated with one of the WHO approved vaccines:
<https://covid19.trackvaccines.org/agency/who/>

*Due to trip cancellations in 2020 and 2021, previous applicants are
encouraged to reapply

What you'll need to apply:



- 1) motivation letter
- 2) letter of support from your PhD supervisor
- 3) proof of PhD studentship
- 4) updated CV



For more information see [here](#)

The Journals of the IAS

For a quick overview of the latest issues of **Sedimentology**, **Basin Research** and **The Depositional Record**, follow these links:

- **Sedimentology**: directly at [Wiley](#) or via the [IAS website](#)
- **Basin Research**: directly at [Wiley](#) or via the [IAS website](#)
- **The Depositional Record**: directly at [Wiley](#) or via the [IAS website](#)

All of the journals of the IAS are active on Twitter. Stay up to date on the latest news and papers in @sedimentology by following the IAS journals: @JSedimentology, @DepositRecord, @BasinResearch.

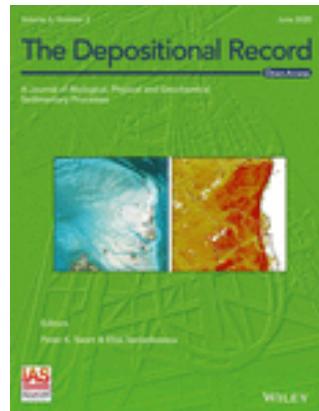


Note from January 2022 Sedimentology will be online only.

The Depositional Record – Open Access – Still no APC!

The Depositional Record will receive its Impact Factor in Summer 2022. The IAS still pays the APC for papers accepted in **The Depositional Record** but this will not last forever. Get those submissions in soon!

The Depositional Record is a fully open access journal publishing high quality articles from across the field of Sedimentology. The journal covers all timescales, from Ancient to Modern, and welcomes articles that emphasise the application of sedimentary processes to the study of paleoclimate, changes in the chemical environment, ocean acidification, extra-terrestrial sedimentology, and the application of genetic methods to understanding sedimentological processes.



[Submit your paper today!](#)

IAS Regional Correspondents



IAS **Regional Correspondents** are your local hotline to the IAS.

Check out the [News Feed](#) to see what is happening in your local community. At this link you will also be able to select your correspondent and even elect to receive information from multiple correspondents. IAS **Regional Correspondents** are IAS Members who have volunteered to act as a representative between sedimentologists in

their region and the IAS. If you know of any sedimentology events going on in your region, then please get in touch with your Regional Correspondent and let them know. Similarly, if your region lacks a Regional Correspondent ([see the map here](#)) and you would like to propose an IAS Member (Full or Student), or yourself, for this position then please send an email to the [General Secretary](#).

Online resources sponsored by the IAS....

The IAS proudly sponsors several online resources.



Carbonateworld is an online atlas containing more than 800 images covering an extensive spectrum of carbonate textures, grain types, diagenetic features, depositional environments and case studies. The images are organised in categories and subcategories (e.g., carbonate rock classification, skeletal grains, ooids, corals, burial diagenesis etc.) and are frequently updated with new material.

<https://carbonateworld.com/>



Seds Online is an exciting free, online initiative that provides an interactive, adaptable and accessible online platform for anyone with an interest in the field of sedimentology. **Seds Online** welcomes members at any career stage, from both industry and academia!

<https://sedsonline.com>: Twitter [@Seds_Online](#)



The **Antarctic Glaciers website** is a fabulous resource for anyone interested in global glacial processes, landforms and sedimentology – despite the name, this site goes way beyond Antarctica!

www.AntarcticGlaciers.org

Don't miss out on all that the IAS has to offer - RENEW TODAY!

The IAS is **the** home of Sedimentology.

We are very proud of our ability to keep our membership fees so much lower than most other professional societies.

You can find a complete list of the benefits of membership of the IAS [website](#).

You may also consider becoming a full member for 5 years at a cost of only €100 – effectively getting one year's membership for free. We also offer 'lifelong' membership for just €400.

STUDENT	FULL
STARTING FROM 10€	STARTING FROM 25€/year
INCLUDED	INCLUDED
Annual membership fee	Annual membership fee
Online Sedimentology	Online Sedimentology
Online Basin Research	Online Basin Research
Online Special Publications (5+ years)	Online Special Publications (5+ years)
Travel Grants	Post-doctoral Grants
Postgraduate Grants	Institutional Grants
J. McKenzie Field Work Award	Conference Sponsorship Request
Conference Sponsorship Request	
Printed Sedimentology at favourable rates	Printed Sedimentology at reduced fee
Reduction for IAS Conferences	Reduction for IAS Conferences
Printed thematic books discounts	Printed thematic books discounts
Special Lecture Tour hosting	Special Lecture Tour hosting
Newsletter	Newsletter
Contributed Content	Contributed Content
Members Directory	Members Directory
OPTIONAL	OPTIONAL
Printed Sedimentology + 20€	Multiple years membership at reduced fee
Online Petroleum Geology + 45€	Lifelong membership at reduced fee
Online + Printed Petroleum Geology + 50€	
Friendship Scheme Sponsor + 15€	Printed Sedimentology + 20€/year
	Online Petroleum Geology + 45€/year
	Online + Printed Petroleum Geology + 50€/year
	Friendship Scheme Sponsor + 15€/year

Gerard Viner Middleton FRSC (1931-2021): A Tribute



It is with sadness that we report the recent passing of Gerard V. Middleton, one the leading pioneers of sedimentology. Gerry, as he was known to his many friends and colleagues, was born in South Africa of English parents, and was educated in England, obtaining his Ph.D. in geology from Imperial College in 1954. For his thesis research, he mapped an area of Devonian rocks in Devon, and one of his earliest papers (1959) is a taxonomic documentation of the tetracorals contained in those rocks. Immediately upon graduation, he emigrated to Canada where he worked first for California Standard Oil Company in Calgary for one year, after which he joined McMaster University, Hamilton, Ontario, in 1955, starting as a Lecturer in Geology, where he remained for the remainder of his professional career. Interestingly, this appointment came on his second application; his first as a paleontologist had been unsuccessful! Perhaps because much of his Ph.D. research involved carbonate rocks, he undertook research on the facies and diagenesis of limestones in both Alberta and Ontario, spending summers working for Shell Oil where he met many of the leading

carbonate researchers of the day. However, he found the local limestones “boring”, and switched his attention to sandstones. His first work on them was petrographic and geochemical in focus, and involved some of the earliest work in sedimentary geology to use advanced statistical techniques, an interest that continued to the end of his career.

Because he appreciated that a deeper understanding of the origin of sandstones would require knowledge of the physical processes responsible for transporting and depositing sediment, Gerry educated himself in fluid mechanics through reading the civil engineering literature. In 1964, he organized a research symposium at the AAPG meeting in Toronto, the papers from which were published as SEPM Special Publication 12 “*Primary Sedimentary Structures and Their Hydrodynamic Interpretation*”, which he edited. This presented the now classic flow-regime concept to geologists, and popularized the series of bedforms that develop as current speed increases. This volume can be credited with introducing fluid mechanics into sedimentology, something that has become central to an enormous body of subsequent research.

One of the particularly hot topics of the time (late 1950s and 1960s) was the “greywacke/flysch problem”, namely the origin of the ubiquitous graded beds that occurred in what were widely thought to be deep-water deposits. Early work by Keunen and others had raised the possibility that they were emplaced by turbidity currents, a process that was then poorly understood. Using his extensive network of connections, Gerry arranged to undertake a series of experiments on density currents at Caltech that formed the basis of the classic series of papers published in 1966-1967, that, together with a 1965 paper on antidune structures and a follow-up paper on “flysch sedimentation” in 1970, represents the foundation of nearly all modern work on turbidity currents! In 1973 and again in 1976, together with Monty Hampton, he expanded on this earlier work and published a more comprehensive process-based classification of sediment gravity flows that remains the basis for most interpretations of the origin of deep-water deposits. Various additional studies with students, commonly but not exclusively based in the Gaspésie region of Quebec, added soundly-based outcrop interpretations to the repertoire of examples that have been extensively used by workers over the years. Gerry published his final synthesis paper on deposition from turbidity currents in 1993. In addition to this primary focus of his research, Gerry also contributed to important papers on such diverse topics as the origin of upper-flow-regime parallel lamination, the interpretation of grain-size distributions in sand, and tidal sedimentation in the Bay of Fundy. Later in life, he turned his attention to topics in the history of geology, and to the origin of the various building stones used in construction in and around Hamilton in the 19th century.

Education in various forms was central to Gerry's character and contribution to the sedimentological community; as he himself said, he was always "... *trying to put in order (in my mind) an area of scientific knowledge ...*", and he had a passion for synthesizing information and passing that knowledge to others, something that may have arisen because most of his own knowledge in clastic sedimentology was self-taught. Most notable was the general textbook "*Origin of Sedimentary Rocks*", coauthored with Harvey Blatt and Raymond Murray, which appeared in 1972, with a second edition in 1980. This was the first comprehensive textbook to take a rigorous process-based approach to sedimentary geology, rather than the descriptive, petrographic approach that had prevailed. Gerry was also the lead author, with John Southard, of the highly influential SEPM Short Course Notes "*Mechanics of Sediment Movement*" (1977, 1984) that introduced many clastic sedimentologists to the intricacies of fluid mechanics. This was preceded by the first-ever SEPM Short Course that he organized with Arnold Bouma "*Turbidites and Deep Water Sedimentation*", followed by short courses on the application of fluid and solid mechanics in the whole of geology, the notes from which became the textbook "*Mechanics in the Earth and Environmental Sciences*" (1994), cowritten with Peter Wilcock. Middleton also returned to his love of statistical methods near the end of his career, organizing short courses on "*Nonlinear Dynamics, Chaos and Fractals with Applications to Geological Sciences*" (GAC, 1991), and "*Nonlinear Dynamics and Fractal: New Numerical Techniques for Sedimentary Data*" (SEPM, 1995), given with Roy Plotnick and David Rubin, and writing the book "*Data Analysis in the Earth Sciences Using MATLAB*" (2000). Indeed, he was fearless in his choice of research topics, taking risks on novel subjects and tackling a wider range of topics than most other workers then or now, making him an ideal person to edit the comprehensive *Encyclopedia of Sediments and Sedimentary Rocks* (2003). In addition to all of this, Gerry was also the behind-the-scenes instigator of the widely popular text "*Facies Models*" edited by his long-time colleague and foil, Roger Walker, commissioning the initial series of articles for the Geological Association of Canada's journal *Geoscience Canada*, which he founded, serving as the inaugural editor. Furthermore, he had a knack for passing his love of education and scholarship to his graduate students, of whom 6 of 13 Ph.D. students went on to university academic careers themselves, expanding Gerry's legacy enormously.

Gerry's involvement in geological and sedimentological societies was a life-long passion. He drew inspiration from the colleagues that he interacted with at meetings, and he instilled this passion in his students as well. He was Vice-President and President of the Geological Association of Canada (1986-1988); a Council Member of the International Association of Sedimentologists for many years and Vice-President from 1978-1982, and he held positions on many SEPM committees. He once boasted that he was the only person to ever run for office in SEPM three times, and to be defeated each time. All of these societies and others have recognized his immense contributions: he was inducted into the Royal Society of Canada in 1970; he is one of only five people to be named an Honorary Member of both the International Association of Sedimentologists (IAS) and SEPM as well as the Canadian Society of Petroleum Geologists (CSPG); he has received the highest award given by both the Geological Association of Canada (GAC)—the Logan Medal (1980) and SEPM, which awarded him both the Pettijohn Medal (1994) and Twenhofel Medal (2003). The Geological Society of London also awarded him the Major John A'Deane Coke Medal in 1995. In many ways, given all of the books and sets of notes that he coauthored, the most relevant honour was the Grover E. Murray Memorial Distinguished Educator Award that he received from the American Association of Petroleum Geologists (AAPG; 1998). The Canadian Sedimentology Research Group (CSPG) also named its sole award in Gerry's name.

Gerry, the person, was gregarious and thoroughly enjoyed his interactions with colleagues. As he himself said, "*I was always interested in acting, from early highschool days, and elecution (sic), debating, etc. I take after my father too, in liking to talk!*". He had a "presence" that caused people to pay attention to what he was saying, no matter what other conversations might have been going on. His critical ability and insight were second to none. Harold Reading, another giant pioneer in the field, once said that Gerry's great qualities were "... *your wisdom and your ability to see to the heart of a question, to analyse it and come up with an answer. You express your thoughts truthfully and sometimes with bluntness. ... You once said to me I am only rude to my friends and to those whom I respect.*" Gerry was, despite his great accomplishments, a humble man, saying that "... *contacts with my contemporaries (e.g., John Ramsay, who was a fellow student at Imperial) had convinced me that my abilities in geological research were*

modest". He thought of himself as a scholar rather than a researcher. He also had a dry, self-deprecating humour, as is indicated by some of the comments quoted above. An anecdote that we remember from our early days as graduate students, involved Middleton telling his students, in all seriousness, while driving between outcrops after a particularly terrible meal at a nameless restaurant, about his "Rolaids Scale" for restaurants, Rolaids © being a popular antacid tablet. He argued that all measurement scales required a standardized benchmark and for this he chose Howard Johnson's Restaurants ©, at that time a widespread hotel/restaurant chain (now with only one remaining location) that served adequate, if bland, food. Gerry considered it to represent zero on his Rolaids Scale. He was proud that it was an inverse scale, like the then popular phi size scale, with meals that were better than the benchmark receiving a negative Rolaids score, and worse meals a progressively higher numbers of Rolaids.

In summary, Gerard V. Middleton was an innovative researcher, sometimes well ahead of the field, with a deep interest in understanding how sediments were created. He was a profound and deeply critical thinker, a trait that he, together with Roger Walker, instilled in their students by means of their facies-models course and home seminar series, a trait that became feared when, in later years, they reviewed manuscripts for publication. He was passionate about passing on knowledge to others, and about his involvement with scientific societies. He was justly decorated for his many services to sedimentary geology, and his many publications continue to be widely cited because of they helped to establish the foundations for our present-day understanding, especially of gravity-flow processes. Beneath all of this external evidence, he was a deeply human individual, who loved his wife of 62 years, Muriel. He is survived by Muriel and their three children, Lawrence, Theresa and Margaret, their spouses and Gerry's grandchildren. I thank Theresa and Lawrence for their assistance in preparing this tribute. For those who would like to give a donation in honour of Gerry's legacy, contributions can be made to the Middleton/Walker Prize in Sedimentary Geology or the Walker/Middleton Fieldwork Scholarship at McMaster University at:

<http://alumni.mcmaster.ca/s/1439/17/giving/landing.aspx?sid=1439&gid=1&pgid=6111>

Information about these scholarship awards can be found at:

<https://www.science.mcmaster.ca/ees/undergraduate/undergrad-scholarships-awards.html#application-required>.

Or you can contact: giving@mcmaster.ca

Robert W. Dalrymple, Queen's University
Janok Bhattacharya, McMaster University

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