IUGS E-BULLETIN (NO. 76, JULY 2012)

2012 - THE YEAR OF THE 34TH INTERNATIONAL GEOLOGICAL CONGRESS AUSTRALIA

LATEST NEWS FROM THE 34TH IGC BRISBANE, 5-10 AUGUST 2012

The IGC commences next month, the current registration numbers are over five thousand two hundred registrants to date making this the largest geoscience event ever held in Australia. Details of the final program, day registration, etc., will be on the website http://www.34igc.org/

The 5th And Final Circular (288ppages) is an important document for all attendees outlining all activities at the IGC including the full scientific program, and business meeting details etc. The one day registration details have been released. Bookings for Field Trips have closed. The pdf of the 5th Circular can be downloaded from: http://mymail.ezemsgs.com/em/mail/view.php?id=1785490750&k=dbcc12e or on the IGC website.

The IGC Program (pdf format) can be downloaded at http://www.34igc.org/FileLibrary/full_program5jul.pdf.

Given the shorter length of the IGC (5 business days), the program will be busy, and all efforts have been made to minimise conflicts. The Closing Ceremony will be from 5.15pm on Friday followed by farewell drinks

- Some 30 professional development workshops will proceed, with well over a thousand participants.

- The IUGS Executive and the International Geological Congress Committee (IGCC) will both meet on Saturday 4th August. After the IUGS-IGC Council meetings on August 9th (which include the election of a new IUGS Executive Committee), the new Executive and the IGCC will meet on Saturday 11th August.

- The IUGS-IGC Council – the Governing body of the IUGS and IGC – will meet on Sunday 5th August and Thursday 9th August (and, only if necessary, on Friday morning 10th August). The IUGS Secretary General and IUGS Secretariat have requested that all IUGS Adhering Organisations nominate their representatives for the Council meeting and submit the appropriate forms before the deadline of 15 July 2012. (Extended deadline - see notice below).

- Most of the more than eighty other business meetings will be held in the evenings of 6-10 August. A very small number have made arrangements for their meetings during the days of 5 and 11 August. It is not possible for business meetings booked from now on to be advertised in the Fifth Circular Handbook.

The GeoExpo, which occupies two large exhibition halls and in which over 260 standard booths have been sold, is effectively sold out however due to some late cancellations, a very limited number of small display booths have become available. (You can view the floor plan via the IGC website "Geoexpo and Sponsorship" tab or download the pdf of the plan via https://events.ccm.com.au/ei/images/IGC/Exhibition/FloorPlan.pdf).

Should you require assistance at any time with information for your attendance at, or involvement in, the 34th International Geological Congress, please email: info@34igc.org

The 34th IGC is now on Facebook and Twitter

Be part of showing the world the unique and incredible geology that Australia, New Zealand, South-East Asia, and the south Pacific region have to offer. You can share your science or ideas, and post your favourite geoscience photographs. Click the links below to find them on Facebook, https://www.facebook.com/34IGC or join the conversation on Twitter at https://twitter.com/#!/34thIGC and don't forget to visit the IGC website: http://www.34igc.org. Get on board now to prepare for your 34th IGC experience. Note also that Twitter will be used actively throughout the conference to keep you up to date. If you are not familiar with using social media sites go to the following links that provide information on using these two sites. Twitter basics: https://support.twitter.com/groups/31-twitter-basics. Facebook basics: http://www.facebook.com/help/basics

FINAL OPPORTUNITY TO REGISTER FOR THE IUGS/IGC COUNCIL MEETINGS AT THE IGC

All official delegates representing IUGS Adhering Bodies (National Committees) and IUGS Affiliated Organizations, as well as all non-voting guests and observers, must pre-register to attend the IUGS/IGC Council meetings scheduled to take place on 5 and 9 August 2012 at the IGC in Brisbane, Australia. The Preregistration
deadline was extended to 15 July 2012. Individuals intending to participate in any capacity in the IUGS/IGC Council meetings must be officially pre-registered through the IUGS Secretariat. You cannot register onsite. If you have not already done so, please confirm your registration immediately by contacting the IUGS Secretary General (pbobrows@nrcan.gc.ca) and the IUGS Interim Secretariat (iugs@usgs.gov). There are no exceptions to this requirement.

2012 IUGS SCIENCE EXCELLENCE AWARD ON STRUCTURAL GEOLOGY
Professor John G. RAMSAY, Professor Emeritus at the ETH Zürich and the University of Zürich, has been awarded the IUGS Excellence Award 2012 on Structural Geology. With this award the international geological community represented by the IUGS acknowledges Professor RAMSAY’s achievements as a scientists, mentor, and international-level leader in the field of structural geology and tectonics.

2012 IUGS SCIENCE EXCELLENCE AWARD: DIGBY McLAREN STRATIGRAPHY AWARD
Professor Stig M. BERGSTRÖM of the Ohio State University, U.S.A., has been awarded the 2012 IUGS Science Excellence Award: Digby McLaren Stratigraphy Award, a career achievement award that recognizes a lifetime of contributions to the field of Stratigraphy. With this award the international geological community represented by IUGS acknowledges Prof. BERGSTRÖM's outstanding contributions on Ordovician stratigraphy worldwide and conodont taxonomy, paleobiogeography and paleoecology.

2012 IUGS SCIENCE EXCELLENCE AWARD ON ENVIRONMENTAL GEOLOGY
Professor Ibrahim KOMOO of the University of Malaysia has been awarded the IUGS Science Excellence Award on Environmental Geology. With this award the international geological community represented by the IUGS acknowledges Prof. KOMOO's leadership in the field of environmental geoscience management, and in communication of environmental geoscience to administration and/or the public, all of which mark a major contribution to the earth sciences.

2012 IUGS SCIENCE EXCELLENCE AWARD ON GEOLOGICAL EDUCATION
Professor Nir ORION of the Weizmann Institute of Science, Israel, has been awarded the IUGS Excellence Award 2012 on Geological Education. With this award the international geological community represented by the IUGS acknowledges Prof. ORION's outstanding contribution to the understanding of Geoscience Education over many years.

2012 IUGS SCIENCE EXCELLENCE AWARD ON GEOSCIENCE INFORMATION
Dr. John LAXTON of the British Geological Survey has been awarded the IUGS Science Excellence Award 2012 on Management and Application of Geoscience Information. With this award the international geological community represented by the IUGS acknowledges Dr. LAXTON's work to advance the application of digital techniques to geology, for which the development of a geoscience interchange language (GeoSciML), and the creation of a harmonized metadatabase of geoscience, constitute major contributions.

2012 IUGS SCIENCE EXCELLENCE AWARD: V.V. TIKHOMIROV HISTORY OF GEOLOGY AWARD
Professor Hugh TORRENS is the inaugural recipient of the IUGS V. V. Tikhomirov History of Geology Award. Professor Torrens is Emeritus Professor of History of Science and Technology at the University of Keele, in the United Kingdom. Professor TORRENS has bridged the divide between science and the humanities and made a huge contribution to the studies of the history of the geological thought, as well as being a notable university teacher. This IUGS Award for the History of Geology is named after the eminent Russian historian of geology, Professor Vladimir Vladimirovich TIKHOMIROV (1915-1994).

2011 EPISODES BEST PAPER AWARD
The IUGS Episodes Best Paper Award for 2011 has been awarded to the four joint-authors; Wojciech CHELMICKI, of the Jagiellonian University, Pawel JOKIEL and Piotr MONIEWSKI, of the University of Lodz, and Zdzislaw MICHALCZYK of the Maria Curie-Sklodowska University, Poland. The award is given in
recognition to the best article published in Episodes during 2011, “Distribution, discharge and regional characteristics of springs in Poland” (Episodes, vol. 34 No. 4: December 2011, pages 244-256).

**2012 HUTCHINSON FUND AWARDS**

Recipients of the 2012 Hutchinson Fund Awards are: Tandis S. BIDGOLI (Arizona, U.S.A.), Shaena MONTANARI (American Museum of Natural History, New York, U.S.A.), Tiffany RIVERA (Idaho, U.S.A.), Danielle THOMSON (Carleton University, Ottawa, Canada), Shuhong WANG (South China Sea Institute of Oceanography, Guangzhou, China), and Sandow M. VIDANA (University of Ghana, Legon-Accra, Ghana). The IUGS Hutchinson “Young Scientists” Foundation promotes the professional growth of deserving, meritorious young researchers from around the world by supporting their participation in important IUGS-sponsored conferences. Beneficiaries of the Hutchinson “Young Scientist” Foundation attended the 28th IGC (Washington, D.C., 1989), the 31st IGC (Rio de Janeiro, 2000), and the 32nd IGC (Florence, 2004), and are now contributing to the GeoHost Program of the 34th IGC (Brisbane, 2012).

**IUGS AWARDS CEREMONY AT THE 34TH IGC**

An IUGS Awards Ceremony will be held during the 34th IGC (Brisbane, Australia) on 6th August at 5:50-6:30 pm. At the Ceremony the following Awards will be presented: the 2011 Episodes Best Paper Award, the 2012 Hutchinson Fund Awards, the IUGS 50th Anniversary – Young Scientist Essay Contest Award, the Harrison Awards, and the IUGS Science Excellence Awards.

**MESSAGE FROM THE IUGS PRESIDENT, ALBERTO RICCARDI**

Almost four years have passed since I was elected IUGS President for the period 2008-2012. Just before the end of my term I want to send my best greetings and thanks to all officers and members of IUGS National Committees, Affiliate Organizations, Commissions, Task Groups, and Joint Programmes, as well as those from organizations with which IUGS has cooperative enterprises, and to many colleagues from different countries for their support and help. During these four years I worked along the lines outlined in my presentation to the IUGS Council in Oslo on August 13, 2008, in my editorial in the 2008 September issue of Episodes, and in my message in the IUGS E-Bulletin # 34. Thus, I have tried to improve interaction with the National Committees and Affiliate Organizations, to support the work of IUGS Commissions and Task Groups with regard to international standards, geoinformation, geoparks, and environmental management, to reinforce or initiate collaboration on different programs with ICSU, UNESCO, and other international organizations, with a main focus in the IGCP, education, geo-heritage, geoparks, and data and information. The organization and working efficiency, and visibility of the IUGS were maintained or improved through different actions, among which it is worth mentioning: the relocation of Episodes Editorial Office, and the IUGS Secretariat, in different countries, the modification of the website, the completion of a new Strategic Plan and streamlining of the Statutes, the financial balances with significant surplus, the introduction of new awards, the celebration of the IUGS 50th, and the IGCP 40th, anniversaries, and active collaboration with the organization of the 34th IGC. In summary, these were four very full years of activity. Personally I am pleased with what has been accomplished and hopeful that it sets a strong foundation for the next Executive Committee and for the future of IUGS. Again my warm thanks for the support and help I received.

Alberto C. RICCARDI  
IUGS President

**IUGS: ASSOCIATE MEMBER OF THE ICSU WORLD DATA SYSTEM**

On June 2012 the IUGS became an Associate Member of the new ICSU World Data System (WDS). The WDS has been created through a decision of the 29th General Assembly of the International Council for Science (ICSU). The WDS builds on the 50-year legacy of the former ICSU World Data Centre system (WDC) and the ICSU Federation of Astronomical and Geophysical Data-Analysis Services (FAGS). The WDS concept aims at a transition from existing stand-alone WDCs, and individual Services, to a common globally interoperable distributed data system that incorporates emerging technologies and new scientific data activities. The new system will build on the potential offered by advanced interconnections between data management components for disciplinary and multidisciplinary scientific data applications. The WDS will enjoy a broader disciplinary and geographic base than previous ICSU bodies and will strive to become a worldwide ‘community of excellence’ for scientific data. To this end, the WDS will work closely with ICSU’s Committee on Data for Science and Technology (CODATA). The WDS goals are to: Enable universal and equitable access to scientific data and information; Facilitate better access to data; Strive for simpler access to data; Work to provide quality-assured data and information; Promote improved data stewardship; Work to reduce the digital divide; and ultimately to
provide data for better science. For more information visit both the websites at: http://www.icsu-wds.org/ and http://www.icsu.org/what-we-do/interdisciplinary-bodies/wds/.

IUGS ENDORSES THE INTERNATIONAL YEAR OF DELTAS (IYDs)
The IUGS gave support in establishing the International Year of Deltas in 2013. The IYD aims to: (1) Increase awareness and attention to the value and vulnerability of deltas worldwide; (2) Promote and enhance international and regional cooperation at the scientific, policy, and stakeholder level; and (3) Serve as a launching pad for a 10-year initiative committed to understanding these complex socio-ecological systems and ensuring preparedness in protecting and restoring them in a rapidly changing environment. Delta dynamics, how deltas came to be what they are now, and how they will respond to future natural and anthropogenic changes, cannot be understood without a coordinated multidisciplinary effort which involves soil scientists, ecologists, hydrologists, geologists, ocean scientists, remote sensing scientists, engineers, and social scientists, at the minimum. Establishing the IYDs will be a significant focus for the urgent need to bring these scientific communities together in a coordinated decadal international effort on research, modeling, and data sharing towards delta sustainability. More information can be found at: http://www.iyds-2013.org

2014 THE INTERNATIONAL YEAR OF CRYSTALLOGRAPHY - IYC\[2014
Following an application from the International Union of Crystallography (IUCr) the United Nations has declared that 2014 will be the official International Year of Crystallography (IYC\[2014). Welcoming this endorsement for crystallography, the IUCr President, Professor G.R. DESIRAJU, invites all crystallographers to use this opportunity to stimulate and ignite an interest in this subject amongst students, scientists, and the general public. Further information at: http://www.iucr.org/

IAG/AIG GRANTS AVAILABLE FOR ATTENDANCE AT THE WORKSHOP ON DRYLAND GEOMORPHOLOGY - GOBABEB, NAMIBIA, SEPTEMBER 8-12, 2012.
The International Association of Geomorphologists (IAG/AIG) offers 3 grants of 350 Euros to young Geomorphologists (under 35 yrs old) from AFRICA (except South Africa) who are willing to take part in the a Dryland Geomorphology Workshop, to be hosted by the South African Association of Geomorphologists and supported by the Royal Geographical Society, to be held at Gobabeb Desert Research Station, Namibia, which is celebrating 50 years of Dryland Research. The deadline for applications is 31 July 2012. More information on the IAG/AIG website front page at: http://www.geomorph.org/main.html

CALL FOR APPLICATIONS FOR THE ICSU GRANTS PROGRAMME 2013
The call for applications for the ICSU Grants Programme 2013 has been released by the ICSU Committee on Scientific Planning and Review (CSPR). The Statement and Schedule as well as the Grant Application form are on the ICSU web site (under Member Zone) at: http://www.icsu.org/member-zone/documents-for-members/grants-programme-2011/2013-grants-programme The Grants Programme is strictly reserved for ICSU members and the information and application form should not be passed to individuals or institutions outside the ICSU family. Proposals should target the ICSU priority areas, ICSU Scientific Unions or Interdisciplinary Bodies must be the Lead Applicants and the ICSU National Members may be supporting applicants. Partnership with the ICSU Regional Offices is strongly encouraged, and the roles of respective partners in preparing and carrying out the proposed work must be made clear in the application. All applications, duly completed, must be sent to Ms. Rohini RAO email (Rohini@icsu.org) by the 1 December 2012 deadline for receipt of applications.

ICSU COMMITTEE ON FREEDOM AND RESPONSIBILITY IN THE CONDUCT OF SCIENCE
The International Council for Science (ICSU) Committee on Freedom and Responsibility in the conduct of Science (CFRS) ( http://www.icsu.org/freedom-responsibility/freedom-responsibility-portal?searchterm=CFRS ) has expressed serious concerns on ‘muzzling’ of scientists and scientific institutions, and also on the lack of protection of ‘whistle-blowers’. The CFRS has become aware of a number of recent incidents in different countries suggest that the freedom of expression and communication for the benefit of society may be at risk. There have been several cases where public sector scientists have been prevented from talking to the media on topics that fall within their expertise but where their views are not necessarily in accord with Government policies. The CFRS is seriously concerned by this trend of increased pressure on both individual scientists and academic institutions to only say what is politically acceptable. The CFRS has previously argued that the self-correcting nature of science requires that policies and mechanisms be in place to protect whistle blowers.
Scientists have a duty to expose fraudulent information and/or misconduct, particularly where this concerns health and environmental risks. For more information on this subject download the pdf booklet from: http://www.icsu.org/publications/cfrs/freedom-responsibility-booklet/freedom-responsibility-universality-of-science.

REDUCING MERCURY USE IN ARTISANAL AND SMALL-SCALE GOLD MINING (ASGM)
A United Nations Environment Programme (UNEP) Global Mercury Partnership booklet "Reducing Mercury Use in Artisanal and Small-scale Gold Mining - A Practical Guide" has been produced in conjunction with the Artisanal Gold Council (AGC) and with assistance from the United Nations Industrial Development Organisation (UNIDO), the University of Victoria, and the IUGS Commission on Geoscience for Environmental Management (IUGS-GEM) Working Group on Gold and Mercury, together with other partners. This has been produced to share information with policy makers, miners, and civil society, about technologies and approaches for reducing, and ultimately eliminating, mercury use in ASGM. The guide, in pdf format, can be downloaded at: http://www.unep.org/hazardoussubstances/Portals/9/Mercury/Documents/ASGM/Techdoc/UNEP%20Tech%20Doc%20APRIL%202012_120608b_web.pdf

NEED TO CONTACT A GEOSCIENCE ORGANIZATION SOMEWHERE AROUND THE WORLD?
The Directory of Geoscience Organizations of the World produced by The Johannes Gutenberg University in Mainz, Germany, includes web links to Geological Surveys, University Geoscience Departments, Geoscience Journals, Societies, and Oil & Gas Companies. Go to: http://www.uni-mainz.de/FB/Geo/Geologie/GeoSurv.html
If you have comments on additions, corrections, updates, or to add a link email denbrook@erdw.ethz.ch. The Directory of Geoscience Organizations of the World produced by the Geological Survey of Japan and containing information on national geological surveys as well as state and provincial geological surveys is available at: http://www.gsj.jp/information/gsj-link/dir/index.html.
The geology.com website with news and information about geology and earth science also lists geological organizations and agencies: http://geology.com/groups.htm.

RECENT INFORMATION ON PUBLICATIONS, JOURNALS AND NEWSLETTERS

CCOP E-News - The Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP) produces the CCOP E-News. See their website at: http://www.ccop.or.th/download/e-news/CCOP_e-news

CPCEMR - The Circum-Pacific Council for Energy and Mineral Resources (CPCEMR) website is at: http://www.circumpacificcouncil.org

EFG - The European Federation of Geologists (EFG) magazine "European Geologist", and the EFG monthly newsletter "GeoNews" can both be downloaded from the website at: http://www.eurogeologists.eu/.

EGS - EuroGeoSurveys (EGS) a consortium of 32 European Geological Surveys which aims to address European geoscience for society. See their EuroGeoSurveys Newsletters at: http://eurogeosurveys.org/newsletters.html. To automatically receive the issues of the Newsletter, you can register online at: http://www.eurogeosurveys.org/newsletterssubscription.html

Future Earth Initiative - news and activities at: http://www.icsu.org/future-earth/


GEOETHICS - The latest copies of the "Geoethics News" newsletter can be downloading from the Geoethics website at: http://tierra.rediris.es/Geoethics_Planetary_Protection/


GSAf - The Geological Society of Africa (GSAf) Newsletters can be downloaded from the Home page of the Society at: http://www.geologicalsocietyofafrica.org


IAG - The International Association of Geomorphologists (IAG/AIG) publishes its newsletter at 3 month intervals. The Newsletters can be downloaded at: http://www.geomorph.org/pb/pbnew.html

IAH - The International Association of Hydrogeologists (IAH) publishes "Groundwater eNews" every 2 months. See their website at: http://www.iah.org/news_enews.asp.

ICSU - The International Council for Science (ICSU) newsletter "ICSU Insight" has updates on ICSU global and regional activities, latest publications, and events. View the newsletters at: http://www.icsu.org/news-centre/insight. Visit the ICSU website at: http://www.icsu.org/

IFA - The International Fertilizer Industry Association (IFA) has produced a Fertilizer Glossary that is now available on-line in five languages: English, French, German, Spanish and Chinese. There are more than 150 terms and expressions related to fertilizer use, soil science, fertilizer manufacture and analysis, and application machinery and methods. See it at: http://www.fertilizer.org/ifa/HomePage/LIBRARY/Glossary-of-fertilizer-terms

IGBP - The International Geosphere-Biosphere Programme (IGBP) see their website at:http://www.igbp.net and their News archive at: http://www.igbp.net/4.d8b4c3c12bf3be638a8000369.html

IMGA - The International Medical Geology Association (IMGA) newsletter can be downloaded from their website at: http://www.medicalgeology.org/pages/public/publications/page_Publications.htm

IUCr - The International Union of Crystallography. See the newsletter at: http://www.iucr.org/news/newsletter


IUSS - The International Union of Soil Sciences (IUSS) Bulletin can be downloaded in high and low resolution PDF from http://www.iuss.org . The monthly IUSS Alert newsletter can be accessed via the same page

OneGeology - an international initiative of the geological surveys of the world with a target of creating dynamic geological map data of the world, available to everyone via the web see: http://www.onegeology.org/

ProGEO News - the newsletter of the European Association for the Conservation of the Geological Heritage can be downloaded from: http://www.progeo.se/

RCMNS - Bulletin of the Regional Committee on Mediterranean Neogene Stratigraphy (RCMNS) downloadable from: http://www.geomare.na.cnr.it/

SCAR - The Scientific Committee on Antarctic Research (SCAR) is a committee of the International Council for Science (ICSU) charged with the initiation, promotion, and co-ordination, of scientific research in Antarctica. SCAR also provides independent scientific advice to the Antarctic Treaty system and other bodies. To download recent SCAR Newsletters go to: http://www.scar.org/news/newsletters/issues2011/. For their "Antarctic Science and Policy Advice in a Changing World: SCAR Strategic Plan 2011-2016" see: http://www.scar.org/strategicplan2011/


YES - The Young Earth-Scientists YES Network Newsletters is at: http://www.networkyes.org/index.php/news/

To find information on websites and newsletters of IUGS Commissions, Task Groups, Initiatives, and Joint Programs see the IUGS website at http://iugs.org/ or http://iugs.org/index.php?page=directory

FORTHCOMING MEETINGS

NOTE the listings of forthcoming meetings shown below will normally be included in an IUGS E-Bulletin only once but will appear on the IUGS website until the event. The IUGS website (www.iugs.org) lists more “geo” related events than any other website devoted to such information. Analysis of the IUGS 2010 website statistics indicates that the “IUGS Calendar” section is the most frequently visited element of our website with regular hits from over 160 countries. The IUGS is pleased to continue this service to help promote all “geo” related events. Please send your meeting posting requests directly to the IUGS Secretary General at pbobrows@nrcan.gc.ca

To see the IUGS listing of forthcoming geoscience meetings, conferences, and workshops, go to the Calendar section of the IUGS website at:
http://iugs.org/index.php?page=calendar&phpMyAdmin=2c9f06db78f0953a55b10dfdc5907f6

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August 5-10, 2012. 34th International Geological Congress (IGC) in Brisbane, Australia. The primary IUGS conference that is held every 4 years. See the information above, and visit the Congress website at: http://www.34igc.org/

August 28-1 September, 2012. The Working Group on Climate Change Third Clean and Renewable Energy Conference and Climate Change (CRECCC). Eastland London Garden Hotel, London. Theme "Impacts and Responses." The conference will include international keynote presentations, case study presentations, technical updates and panel discussions. The CRECCC welcomes papers from technical experts in an area of clean and renewable energy, or who manage investments within the industry on a broad range of issues for consideration by the All-Energy experts. Papers should be sent as a Word Document or PDF to Dr. David Jackson, Conference Chair at: callforpaperscreccc@yahoo.co.uk no later than 25 July 2012. Notification of Acceptance will be by 5 August 2012. See the website at: http://creccc.org.uk/instruction.html


October 28-31, 2012. 23rd CODATA International Conference. Taipei, Taiwan. Theme "Open Data and Information for a Changing Planet". See the website at: http://www.codata2012.com/ Note that the recently formed ICSU World Data System (WDS) will participate in this 23rd CODATA International Conference.


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July 8-10, 2013. The 11th International Congress for Applied Mineralogy (ICAM). Mianyang, China. Theme “Applied Mineralogy and Future”, The ICAM is organized biennially by the International Council for Applied Mineralogy (ICAM), and the 11th ICAM congress is aimed at further strengthening worldwide academic exchange and cooperation in Applied Mineralogy. It will offer a platform for scientists and engineers to discuss recent research progress with a focus on future trends in applied mineralogy and to promote interdisciplinary cooperation. See the webpage at: http://www.icam2013.org/.


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With best regards, Colin SIMPSON IUGS Councillor
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To be added to or removed from this E-Bulletin distribution list, please email: IUGS@usgs.gov