



IAMG

Newsletter

Official Newsletter of the International Association for Mathematical Geosciences

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How do you choose which journal to submit your paper to? It depends on what matters the most to you. Impact factor? Scope? Speed of reviews? Readership? Associations? What about open access? Green or gold? How do you pay for the open access fee?

The publishing landscape is changing, with new publishers (reputable and not) and new requirements from funding bodies some of the driving factors.

This is highlighted by the number of universities and groups that have chosen not to renew their subscriptions to the major publishers.

The IAMG needs to consider its stance on open access for both our existing journals as well as any future publications. Page 6 includes an opinion piece from Guillaume Caumon that presents some of the issues and options that the IAMG faces. Please consider sharing your opinion through the survey that you will be emailed.

IAMG recently partnered with Elsevier to release Applied Computing and Geosciences, a new open access sister journal to Computers & Geosciences. The first issue will be published later this year.

This year the IAMG's annual conference is in State College, Pennsylvania, USA. With six keynote speakers, eight short courses and a wide variety of topics it will be a great event. See you there!

Katie Silversides

<>

It's time to nominate candidates for the 2020 IAMG Awards!

The Association invites all members to submit nominations for the John Cedric Griffiths Teaching Award and the William Christian Krumbein Medal

Please note the Deadline: **October 31, 2019**

For details about prerequisites for nominations please see the IAMG web site <http://www.iamg.org/> and click on Awards.

There is also a list of past recipients and their laudatios on the web site. Please have a look at it before sending your nominations!

The (informal) documents which should accompany a proposal are:

- a short statement summarizing the relevant qualifications of the nominee
- a curriculum vitae of the nominee

Nobody gets an award without a nomination, so please support your colleague when you believe he/she deserves an award by submitting a nomination.

Nominations can be submitted by a single person or by a group.

The Laudations written over the last few years and published in Mathematical Geosciences are a good source of inspiration on how to write a nomination.

Nominations can be submitted via e-mail <max@uidaho.edu> or sent to:

Xiaogang (Marshall) Ma - Chair, IAMG Awards Committee
Department of Computer Science, University of Idaho
875 Perimeter Drive MS 1010, Moscow, ID 83844-1010, USA

Nominations for other Awards may also be submitted at any time

Student Travel Grants

The IAMG Student Travel Grant Program provides assistance for IAMG student members to attend and give presentations at the IAMG Annual Conference and other related conferences.

The grant can be used to help cover the cost of conference registration, travel, lodging, and meals.

To be eligible you must be a student, an IAMG member and have been accepted for an oral or poster presentation. An individual student member may apply once as pre-doctoral graduate student, and once as PhD student

Apply no later than two months before the start of the Conference and after notification of acceptance of contribution.

More details at:

<https://iamg.org/index.php/publisher/articleview/frmArticleID/41>

Apply at:

<http://www.iamgmembers.org/studentforms/use/travel/form1.html>

International Association for Mathematical Geosciences

IAMG Office (official address)

5868 Westheimer Rd. # 537

Houston, TX 77057, U. S. A

E-mail: support@iamgmembers.org

Tel. Messages: +1-832-380-8833

Fax: +1-800-983-1346

Website: IAMG.org

Officers of the Executive Committee

President: **Jennifer McKinley**

School of Natural and Built Environment, Queen's University,
Belfast BT7 1NN, UK, Tel. 44 (0)28 90973827,

E-mail: j.mckinley@qub.ac.uk

Executive Vice President: **Raimon Tolosana-Delgado**

Helmholtz-Institut Freiberg für Ressourcentechnologie

Dept. Modelling and Evaluation

Chemnitz Str. 40, 09599 Freiberg, Germany

Tel.: +49 351 260-4415

E-mail: r.tolosana@hzdr.de

Secretary General: **Eric Grunsky**

China University of Geosciences Beijing, China

Dept. Earth & Environmental Sciences, Univ. Waterloo, Canada

E-mail: egrunsky@gmail.com

Treasurer: **David R. Collins**

IAMG, PO Box 442504, Lawrence, KS 66044-7504, USA

Phone: +1 785-760-5005, E-mail: drc_iamg@hotmail.com

Other Voting Council Members

Vice Presidents:

Christien Thiert

University of Cape Town, Department of Statistical Sciences,
Private Bag, Rondebosch 7700, South Africa, Tel: 27-21-650-3223, fax:
27-21-650-4773, E-mail: christien.thiert@uct.ac.za

Guangsheng Yan

Development and Research Center

China Geological Survey

Beijing 100037, China

E-mail: yguangsheng@mail.cgs.gov.cn

Past President: **Qiuming Cheng** (non voting)

Dept. of Earth and Space Science and Engineering,

York University, 4700 Keele Street, Toronto, Ontario M3J 1P3,

Canada, Tel: +1 416 736 2100 (Ext: 22842), Fax: +1 416 736 5817

E-mail: qiuming@yorku.ca

Editors

Computers & Geosciences

IDYST, Quartier UNIL-Mouline, Bâtiment Géopolis 3337,

CH-1015 Lausanne, Switzerland

Tel: +41 21 6924463, E-mail: gregoire.mariethoz@minds.ch

Grégoire Mariéthoz

Dario Grana

University of Wyoming, Laramie, Wyoming, USA,

Tel: +1 307-223-2079, dgrana@uwyo.edu

Derek Karssenber

Faculty of Geosciences, Utrecht University, Heidelberglaan 2, 3584 CS

UTRECHT, The Netherlands, d.karssenber@uu.nl

Mathematical Geosciences

Department of Mining, Metals and Materials Engineering,

McGill University, Montreal H3A 2A7, Canada

Tel: +1 514 398-4986, E-mail: roussos.dimitrakopoulos@mcgill.ca

Roussos Dimitrakopoulos

Natural Resources Research

University of KwaZulu-Natal

Durban, South Africa

Email: ejmcarranza@gmail.com

John Carranza

Applied Computing and Geosciences

see address above

Eric Grunsky

IAMG Newsletter and Website

Australian Centre for Field Robotics,

University of Sydney, NSW 2006, Australia

Tel: +61 2 9351 7907, E-mail: newsletter@iamg.org

Katherine Silversides

Councilors

K. Gerald van den Boogaart, Helmholtz-Zentrum

Dresden-Rossendorf

Chemnitz Str. 40, 09599 Freiberg, Germany

Tel: +49 351 260 - 4409

E-mail: k.van-den-boogaart@hzdr.de

Guillaume Caumon, École Nationale Supérieure de Géologie,

Rue du Doyen Roubault, BP 40

F-54501 Vandœuvre-lès-Nancy Cedex, France

Phone: (33) 3 83 59 64 40; Fax (33) 3 83 69 64 40

E-mail: Guillaume.Caumon@univ-lorraine.fr

Jaime Gómez Hernández, Univ. Politecnica de Valencia

Departamento de Ingeniería Hidráulica

46071 Valencia, Spain

Tel: 963879614 (Ext.:79614)

E-mail: jgomez@jupv.es

Xiaogang "Marshall" Ma, Department of Computer Science

University of Idaho, 875 Perimeter Drive MS 1010,

Moscow, ID 83844-1010, United States,

Tel: +1.208.885.6592, E-mail: max@uidaho.edu

Special IGC Councilor:

Hari Shankar Pandalai, Indian Institute of Technology Bombay

(IITB), B-45, IIT Campus, Powai, IIT Powai, Sakinaka,

Mumbai, 400076, Maharashtra, India

E-mail: pandalai@iitb.ac.in

Committee Chairs

Awards Committee: **Xiaogang "Marshall" Ma**

see address above

Curriculum Quality Committee: **Julián Ortiz**

Department of Mining Engineering, Queen's University

Kingston, ON K7L 3N6 Canada

Phone: 613-533-2910, E-mail: julian.ortiz@queensu.ca

Lectures Committee: **Christien Thiert**

see address on left

Meetings Committee: **Helmut Schaeben**

Technische Universität Bergakademie Freiberg,

Bernhard-von-Cotta Str. 2, 09596 Freiberg, Germany

E-mail: schaeben@geo.tu-freiberg.de

Outreach Committee: **Eric Grunsky**

see address on left

Publications Committee: **K. Gerald van den Boogaart**

see address above

Students Affairs Committee: **Ute Mueller**

Edith Cowan University, Joondalup Campus, JO5.208

270 Joondalup Drive, Joondalup WA 6027, Australia

Tel: +61863045272, E-mail: u.mueller@ecu.edu.au

Archivist

Graeme F. Bonham-Carter

110 Aaron Merrick Drive, Merrickville, ON K0G 1N0, Canada

Tel: +1 (613) 269-7980

E-mail: Graeme.bc1@gmail.com

PRESIDENT'S FORUM

As I write I'm preparing my Keynote presentation for a session on 'Disaster monitoring and risk assessment' jointly organised by the IAMG and the Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences (CAS) at the International Conference on Silk-roads Disaster Risk Reduction and Sustainable Development (SiDRR) 11-12 May. As President I am always honoured by such prestigious opportunities to present the work of the IAMG and to pursue opportunities to forge closer alliances with partners. Making connections and building strong and integrated, collaborative networks are key characteristics of the IAMG. Integration of data and interdisciplinary research are two essential requirements to addressing global issues and underpin our ability to achieve the sustainability goals in the environment, climate, health and energy. By pursuing both we open up opportunities to connect different data systems, data streams and sources to generate greater insights and improve science knowledge.

Interdisciplinary collaboration is a key enabler to bringing people and data together and the means to achieving outcomes that could not be achieved within the framework of a single discipline. Developing strong interdisciplinary working with shared interests and a common purpose generates a diversity of perspectives across productive networks that can generate new outputs and good science. As many colleagues will testify, the whole collaborative effort continues to be greater than the sum of the individual parts. I believe that the IAMG is uniquely placed to meet this challenge. Interdisciplinary science and inclusivity are both mission-critical hallmarks of IAMG and strategic enablers for its future long term success.

For this reason, the Council supported the involvement of the IAMG as a founding partner in the first IUGS-recognized big science program - Deep-time Digital Earth (DDE) – which was officially launched at the 73rd IUGS EC Meeting and DDE Forum Held on the 25 – 28th February 2019 in Beijing, China. IUGS President and IAMG Past President Qiuming Cheng announced the DDE program at the opening of the DDE Forum.

I would like to acknowledge Qiuming's proactive role in inviting the IAMG to be involved in this important initiative. Michael Stephenson from the British Geological Survey (BGS) was appointed as the President of the Governing Council of the DDE Forum. Roland Oberhaensli, IUGS Past President, was appointed as the Chair of the Executive Committee and Wang Chengshan from the China University of Geosciences (Beijing) was appointed as the Co-Chair of the Executive Committee of the DDE Programme.

I was very pleased to represent the IAMG at the signing of the DDE accord in Beijing on 26th February. Other Founding Members of the DDE include: the China Geological Survey (CGS); British Geological Survey (BGS); Russian Geological Research Institute (VSEGEI); International Commission on Stratigraphy (ICS); Commission on the Management & Application of Geoscience Information (CGI); American Association of Petroleum Geologists (AAPG); International Association on the Genesis of Ore Deposits (IAGOD); Commission of Geological Map of the World (CGMW); International Association of Geomorphologists (IAG); International Palaeontological Association (IPA), and International Association of Sedimentologists (IAS).

The goal of the DDE is to develop integrated networks of data in areas including stratigraphy, paleontology, sedimentary, paleogeography, paleomagnetic, tectonics, rock and

geochemistry and climate simulation. IAMG members are active in many of these areas but the important issues of big data interoperability, management and spatial data analysis are particularly where the IAMG can offer a breadth of experience and fresh insights through established and innovative approaches in geoinformatics, machine learning, geomodelling and many other areas. The DDE Programme will be officially kicked-off at the 36th International Geological Congress in New Delhi, India in 2020.

While the research insights from IAMG2018 will be published in Special Issues of the three IAMG journals *Mathematical Geosciences*, *Computer and Geosciences* and *Natural Resources Research*, we are looking forward to our 20th Annual Conference IAMG2019, which will be hosted by State College, Pennsylvania, USA 10 – 16 August.

On behalf of the council I am very grateful to the IAMG2019 local organising Chair Sanjay Srinivasan and committee, the work of IAMG Treasurer David Collins and IAMG office manager Regina van den Boogaart. We also appreciate the support of our sponsors Aramco and the US Geological Survey (USGS), and the support from Penn State University including the Institute for CyberScience, Institutes of

Energy and the Environment (IEE), Energy Institute and the College of Earth and Mineral Sciences.

Our mission - to promote, worldwide, the advancement of mathematics, statistics and informatics in the Geosciences - remains the focus for IAMG2019. The historic setting and more recent expertise of Penn State University also provides an opportunity to consider how all aspects of mathematical geosciences can assist in addressing the global scientific challenges of the food, water, and energy nexus. IAMG Distinguished lecturer, Philippe Renard from the University of Neuchâtel, the Georges Matheron Lecturer, Vera Pawlowsky-Glahn and the Felix Chayes prize awardee, Peter Filzmoser, Vienna University of Technology will present keynotes at IAMG2019. Providing opportunities for early career scientists is key for IAMG 2019 and we welcome the active involvement of students and members from IAMG student chapters. This year we will present two Vistelius awards to one male and one female early-career scientist for their promising contributions in research in the fields of mathematical geosciences or geoinformatics. This means that the keynote speakers for IAMG2019 will include two early career researchers, Vistelius awards recipients, Alessandra Menafoglio, Politecnico di Milano and Wenlei Wang, Chinese Academy of Geological Sciences.

We have an appetite for growth in our IAMG student chapter numbers but acknowledge that we have more work to do. As our excellent Vistelius award recipients show, there are strong networks of active early career researchers who may not have the opportunity to be associated with an official IAMG student chapter. We need to listen to our members to learn how best to nurture this appetite for developing our early career scientists.

As the IAMG is an affiliated association of the International Union of Geodesy and Geophysics (IUGG), Secretary General, Eric Grunsky, will represent the IAMG at the 27th IUGG General Assembly July 8-18, in Montréal, Québec, Canada. Eric will also present in a session on Probabilistic & Statistical Approaches in Geosciences

The IAMG will be well represented at the 36th International Geological Congress (IGC) 2-8th March 2020 in New Delhi,

continued on next page

NRR continued from p. 7

India. Our IGC councillor, Hari Pandalai has successfully organised a number of sessions under Theme 35: Advances in Mathematical Geosciences, Mineral Resource Evaluation and Mine-Planning. In addition to the Special IAMG Award Keynote session (Theme 45), the IAMG has also planned a joint symposium 'Geoscience Information-Integration' with the CGI-IUGS, OneGeology and CCOP. This is an opportunity to highlight new research and achievements in mathematical geoscience, geoscience information sharing and advances in geoscience-related big data.

The Council has been considering how the IAMG should engage with open access publication. The IAMG open access Golden Anniversary book "Handbook of Mathematical Geosciences: Fifty Years of IAMG" editors B.S. Daya Sagar, Qiuming Cheng and Frits Agterberg, published with Springer has been downloaded over 211100 times. This is striking evidence that there is a demand and need for open access resources. For this reason, the Council is keen to hear from members on your experience and requirements for open access publishing opportunities. The IAMG and Elsevier have recently partnered in a new Open Access journal called Applied Computing and Geosciences. Eric Grunsky will be the first Editor-in-Chief of this new open access journal. This is one way to offer open access and the Council is keen to hear from members on how the IAMG should explore further open access journal opportunities. This discussion is explored further by Guillaume Caumon in this Newsletter. I would encourage all IAMG members to engage in this conversation and complete the online poll provided at the end of Guillaume's discussion.

On behalf of the IAMG I would like to acknowledge the contribution of Keith Long as Editor-in-Chief for Natural Resources Research (NRR) from 2009 to 2012, who passed away after a long illness on March 29th. Our sincere condolences go to his wife Kay and family. As Keith's colleague Colin Williams (USGS, Tucson office) describes, Keith blended

his enthusiasm for both earth science and economics to advance both academic knowledge and exploration practice. Colin's thoughtful tribute for Keith is published in the NRR (2019) <https://doi.org/10.1007/s11053-019-09485-6>.

Thank you once again for your support and commitment to progressing together the advancement of mathematics, statistics and informatics in the Geosciences. I look forward to seeing many of you at IAMG2019.

Jenny McKinley

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Member News

Spatio-Temporal Statistics with R

Christopher K. Wikle, Andrew Zammit-Mangion, and Noel Cressie

Wikle, Zammit-Mangion, and Cressie (2019) is a recently published Chapman & Hall/CRC book: "Spatio-Temporal Statistics with R," which makes hierarchical spatio-temporal modeling accessible to scientists and engineers solving important practical problems and needing software that is reliable and methodologically rigorous. Hands-on Labs show how to visualize and model spatio-temporal data, as well as diagnose model predictions.

The book is available as a free downloadable PDF at: <https://spacetimewithr.org>

This website also gives information on how to install the associated R package "STRbook"; it is a place where new software, data sets, and articles on spatio-temporal statistics can be posted; and it gives details on where a hard-cover version can be purchased from C&H/CRC Press.

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The DDE Accord signing by the DDE Founding Members including Jenny McKinley for the IAMG.

Keith R. Long (1957–2019)



After a long illness, our colleague Keith Long, of the United States Geological Survey (USGS) Tucson office, passed away last March 29th. Those of you who know Keith are familiar with his diverse, significant contributions to mineral resource studies over his more than 30-year career with the USGS. Through this work, Keith pursued his enthusiasm for both earth science and economics, blending his academic knowledge (BS and BA, University

of California Santa Cruz; MSc, University of Michigan; PhD, University of Arizona) with the practical early-career experience of working with exploration companies in Arkansas, California, Colorado, and Montana. At the USGS, Keith's work spanned many topics in both domestic and international contexts. His most important contributions are far too numerous to list here but of particular note are his service as a founding member of the Center for Inter-American Mineral Resource Investigations in Tucson, which undertook cooperative mineral resource studies in Latin America, his work on of historical tailings production and disposal practices in support mineral environmental assessments, his investigation of the economics of porphyry copper mining, and his highly impactful summary and analysis of the principal rare earth element deposits of the USA. Somehow in all of this, he found time to lead projects and serve as Editor-in-Chief for Natural Resources Research (from 2009 to 2012).

Despite the impressive depth and breadth of Keith's professional contributions, what stays with me most about Keith is the way he battled through his many health challenges in recent years. Talking with Keith, whether in the Tucson office or over the phone, one would never know whether he was in a relatively good state of health or had just come back to work from a life-threatening and debilitating illness. Even in the last few days, he was asking colleagues to send him some work-related material to keep himself occupied. Keith maintained a positive attitude and dedication to his work no matter what personal or professional hurdles he encountered, and I have always considered him an outstanding example of a USGS scientist and colleague. Keith is survived by his wife Kay and a large, extended family in Arizona, California and Wyoming.

Colin Williams (USGS)

Nat Resour Res (2019)

<https://doi.org/10.1007/s11053-019-09485-6>

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Student Chapter News

Wyoming Student Chapter

One of our students, Brady Flinchum (actually the founder of the IAMG student chapter at University of Wyoming), just received an award.

His paper "Estimating the water holding capacity of the critical zone using near-surface geophysics", was selected for the 2019 "MG Anderson Editor's choice Award for outstanding paper of the year" in Hydrological Processes.

<https://doi.org/10.1002/hyp.13260>

Dario Grana

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Nancy Student Chapter

1. In October 2018, we presented the IAMG and the IAMG Student Chapter of Nancy to our MSc students. Six of them joined the Student Chapter. (you can find the news on our website: <http://www.ring-team.org/home/iamg-student-chapter/31-news/iamg-student-chapter-news/189-12-10-18-welcome-of-the-new-msc-students>).



2. In March 2019, we welcomed Philippe Renard, IAMG Distinguished Lecturer, in Nancy for a seminar entitled "Geological realism and groundwater modeling: why, how, and does it pay off?" (you can find the news on our website: <http://www.ring-team.org/home/iamg-student-chapter/31-news/iamg-student-chapter-news/208-12-03-19-pr-philippe-renar-seminar-iamg-distinguished-lecturer>).



3. Yves Frantz (2nd year PhD) went to the CEREGE lab (Marseille, FRANCE) to work with Sophie Viseur. He presented his works on karstic network simulations through seminars and meetings with researchers and speleologists. Furthermore, he supervised some Bachelor's degree students on karstic field.
4. Paul Baille (1st year PhD) went to the Equinor headquarters (Stavanger, NORWAY) to work with Anita Kolbeinsten, Dirk Knaust, Silvan Hoth and Marcus Apel on the North Sea Gudurn and Sigrun core data. The purpose of the mission was to interpret facies and depositional environment to obtain a strong dataset. This dataset will be used on Paul's well correlation algorithm to make it more robust.
5. Yves Frantz, Melchior Schuh-Senlis and Corentin Gouache, 2nd year PhDs, are pleased to present oral seminars at the 20th IAMG Annual Conference in State College in August.
6. We congratulate Julien Renaudeau & Modeste Irakarama (former members) for their impressive PhD defenses (24 & 25 April). They are now Dr.!
7. Finally, every PhD student of our Student Chapter will do an oral presentation at the 30th Annual RING Meeting in September in Nancy. Some MSc students will present posters.

Corentin Gouache

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IAMG peer-reviewed journals - What do you think ?

The peer-reviewed journals of the IAMG are essential tools serving the main mission of the Association to promote the advancement of mathematics, statistics and informatics in the Geosciences. Members know and read the journals to learn about recent advances, and many also submit and publish original research in Mathematical Geosciences (MG), Computers & Geosciences (C&G) and Natural Resources Research (NRR). Another aspect, which is not necessarily well known from the membership, is that publications significantly contribute to the IAMG budget, which is used for IAMG Awards, publication of this newsletter, online services and management, IAMG conferences, student grants, etc. This significant income from IAMG journals explains why the cost of individual IAMG membership is so low.

However, the scientific publishing world is changing. There are more and more complaints that the academic community which produces and reviews most of the articles, also has to pay significant fees to publishers to access these papers. Several universities have had difficulties paying increasing library subscriptions. A very concrete example is that my university has not renewed its subscription to SpringerLink in 2019, and is still in discussion about the renewal of Sciencedirect. The recent example of University of California indicates that this renewal should not be taken for granted.

In Europe and elsewhere, open science directives encourage or force authors to make their research freely accessible to everyone. A simple way to achieve this is by self-archiving: the author publishes the preprint and/or the post-referee version on preprint servers such as EarthArXiv, on personal web pages or on institutional repositories such as HAL. As self-archiving policy may vary depending on the publisher, SHERPA RoMEO summarizes journal policies to help authors adopt a responsible and lawful sharing of their research. National laws also constrain the self-archival policy. France law, for instance allows authors to post the post-referee author version of their accepted periodical journal papers on institutional repositories after an embargo period of 6 months.

In my view, these repositories threaten the classical commercial publishing model, which could affect both the profitability of commercial publishing houses and the budget of not-for-profit scientific organizations such as the IAMG. A reply to this has been the development of open-access papers and journals, for which authors must pay a publication fee. As the fee structure (before or after paper acceptance) and the fee amount vary from one journal to another, authors now choose a target journal not only based on scope, reputation, but also based on their research budget. An interesting example of a professional society who has embraced these issues is EGU, which publishes several journals through a not-for-profit organization (Copernicus), using also an original public peer-reviewed process.

The IAMG council has been discussing these matters for quite a while. A point which came up in the discussions is that changes to the status quo could compromise the good working relationship of the IAMG with the publishers of MG, NRR (Springer) and C&G (Elsevier), with a direct impact on the IAMG resources. Another hurdle is engaging IAMG members into yet another journal could be delicate and compromise their implication in existing journals.

In my view, we are missing the opinion of the IAMG members on these important issues. So what do you think of the existing IAMG journals? What would be the best move for our Association? Please take a few minutes to fill in the poll that will be emailed to you. Please share your ideas!

Guillaume Caumon

Distinguished Lecturer Reports

Philippe Renard

2019 Distinguished Lecturer

Professor Philippe Renard is offering several talks as the IAMG 2019 Distinguished Lecturer on the subject:

Stochastic modeling of karstic system: structure, parameters and inversion. Does geological realism of heterogeneous aquifers pay off?

More information will be on <https://iamg.org/special-lectures/current-distinguished-lecturer.html>

Please contact support@iamgmembers.org for further details

Four talks have already been delivered:

- Université de Lorraine, Georesources Laboratory, IAMG student chapter. Nancy, France. 12 March 2019. Title: Geological realism and groundwater modeling.

- Université de Montpellier, Hydrosiences Laboratory, Montpellier, France. 20 March 2019: Title: Multiple-Point statistics for stochastic modeling, where do we stand?

- Southern University of Science and Technology, School of Environmental Science and Engineering, Shenzhen, China. 25 April 2019. Title: Geological realism and groundwater modeling

- The University of Hong Kong, Department of Earth Sciences. Hong Kong. 29 April 2019. Title: Stochastic modeling of karstic systems.

Upcoming talks

- Venice International University. 1-5 July 2019. Introduction to geostatistics and aquifer characterization within the PhD school : Hydrogeophysical inversion and data assimilation for the characterization and monitoring of coastal aquifers.

- IAMG 2019 conference. Penn' State University. 10-16 August 2019. Title: Karst Aquifer Modeling, State of the Art and Challenges.

- RWTH Aachen University, Computational Geoscience and Reservoir Engineering, 21 October. Provisional title: Stochastic modeling of karstic systems.

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Springer Encyclopedia of Mathematical Geosciences

B. S. Daya Sagar, Qiuming Cheng, Jennifer McKinley and Frits Agterberg

A proposal on "Encyclopedia of Mathematical Geosciences" by B. S. Daya Sagar, Qiuming Cheng, Jennifer McKinley and Frits Agterberg is approved by the Springer International Publishers. This Encyclopedia of Mathematical Geosciences that is scheduled for completion during the end of 2021 would be a complete and authoritative reference work. We expect that it provides concise explanation on each term that is related to Mathematical Geosciences.

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IAMG is on LinkedIn, Twitter and Facebook!

Join the conversation using @IAMG_Math_Geo for news, journal and conference update..

LinkedIn





IMAG Journal Reports

Applied Computing and Geosciences

The IAMG and Elsevier have partnered in a new Open Access journal: Applied Computing and Geosciences.

Applied Computing & Geosciences is an online-only Open Access journal focused on all aspects of computing in the geosciences, and like its sister journal Computers & Geosciences, Applied Computing & Geosciences' mission is to advance and disseminate knowledge in all the related areas at the interface between computer sciences and geosciences. A brief description of the journal is located at: <https://www.journals.elsevier.com/applied-computing-and-geosciences/>

As an Open Access journal, all articles are free for everyone to read, download, copy and distribute. More details can be found at: <https://www.elsevier.com/journals/applied-computing-and-geosciences/2590-1974/open-access-journal>



Open Access Fees Waived for the new IAMG Journal: Applied Computing and Geosciences

The new IAMG journal, Applied Computing and Geosciences is accepting new submissions at no cost. This offer is limited to those submissions received before 30 September 2019. Please visit the ACGS website for more details and the article submission process.

Eric Grunsky
Editor-in-Chief

Applied Computing and Geosciences
www.journals.elsevier.com/applied-computing-and-geosciences

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IMAG Journal Contents

Natural Resources Research

NRR - Volume 28, Issue 1, January 2019

An Astounding First Impact Factor for NRR — Emmanuel John M. Carranza

New Insights into Element Distribution Patterns in Geochemistry: A Perspective from Fractal Density — Yue Liu, Qiuming Cheng, Kefa Zhou

Isolation Forest as an Alternative Data-Driven Mineral Prospectivity Mapping Method with a Higher Data-Processing Efficiency — Yongliang Chen, Wei Wu

Bayesian and LASSO Regressions for Comparative Permeability Modeling of Sandstone Reservoirs — Watheq J. Al-Mudhafar

Hydrogeophysical Characteristics of Pan-African Aquifer Specified Through an Alternative Approach Based on the Interpretation of Vertical Electrical Sounding Data in the Adamawa Region, Central Africa — Z. Arétouyap, D. Bisso, P. Njandjock Nouck, L. E. Amougou, Menkpa, J. Asfahani

Evolution of Fluid Electrical Conductivity Profiles Associated with a Saline Contaminant Plume in a Horizontal Single-Plane Fractured-Rock Aquifer System — M. F. Moleme, M. Gomo

Upgrading of Oil Shale by Flotation Without Collector — S. E. El-Mofty, N. Khairy, A. M. El-Kammar, A. A. El-Midany

Spatial Simulation and Characterization of Three-Dimensional Fractures in Gejiu tin District, Southwest China, Using GEOFRAC — Chunxue Liu, Taiki Kubo, Lei Lu, Katsuaki Koike, Wenjie Zhu

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Prospect Analysis and Hydrocarbon Reservoir Volume Estimation in an Exploration Field, Shallow Offshore Depobelt, Western Niger Delta, Nigeria — Kehinde David Oyeyemi, Mary Taiwo Olowokere, Anzegbobor Philips Aizebeokhai

Evaluation of Relative Permeability in Coalbed Methane Reservoirs Based on Production Data: A Case Study in Qinshui Basin, China — Xiaoqian Guo, Qiang Yan, Anjian Wang

Assessment of Geochemical Anomaly Uncertainty Through Geostatistical Simulation and Singularity Analysis — Yue Liu, Qiuming Cheng, Emmanuel John M. Carranza, Kefa Zhou

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Deep-Lacustrine Shale Heterogeneity and Its Impact on Hydrocarbon Generation, Expulsion, and Retention: A Case Study from the Upper Triassic Yanchang Formation, Ordos Basin, China — Bojiang Fan, Liang Shi

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Geohydrodynamic Parameters and Their Implications on the Coastal Conservation: A Case Study of Abak Local Government Area (LGA), Akwa Ibom State, Southern Nigeria — U. E. Uwa, G. T. Akpabio, N. J. George

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Journal Statistics

Mathematical Geosciences:

2017 ISI Impact factor: 1.573 (SJR=0.760)

5-Year Impact Factor: 1.909 (SNIP=0.943)

Ave. review time: 83 days (submission to first decision 2017)

Computers & Geosciences:

2017 ISI Impact Factor: 2.567 (SJR=1.350)

5-Year Impact Factor: 2.895 (SNIP=1.583)

Ave. review time: 7.8 weeks (submission to first decision 2018)

Natural Resources Research:

2017 ISI Impact Factor: 3.094 (SJR = 0.800)

2017 SNIP: 1.326

Ave. review time: 20 days (submission to first decision 2017)

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Real Option Identification Framework for Mine Operational Decision-Making — Ajak Duany Ajak, Eric Lilford, Erkan Topal

Guidelines for Enhancing the Signature of Multi-element Mineralization Using Principal Component Analysis: Part 1—Monte Carlo Simulation — Jie Yang, Eric Grunsky, Qiuming Cheng

Calibration of Genetic Algorithm Parameters for Mining-Related Optimization Problems — Martha E. Villalba Matamoros, Mustafa Kumral

Correction to: Calibration of Genetic Algorithm Parameters for Mining-Related Optimization Problems — Martha E. Villalba Matamoros, Mustafa Kumral

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Artificial Fracture Stimulation of Rock Subjected to Large Isotropic Confining Stresses in Saline Environments: Application in Deep-Sea Gas Hydrate Recovery — V. R. S. De Silva, P. G. Ranjith, M. S. A. Perera, B. Wu

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Mathematical Geosciences

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A Special Issue on Geothermal Energy and Its Application — Kewen Li

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Modeling mafic carbonation efficiency using mafic rock chemistries from Nevada, USA — Daniel M. Sturmer, Regina N. Tempel, Jonathan G. Price

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- Atmospheric and Earth System Science • Multiple Point Statistics

SPEAKERS



Susan M. Agar
Aramco Global Research Center



Peter Filzmoser
Vienna University of Technology



Alessandra Menafoglio
Politecnico di Milano



Vera Pawlowsky-Glahn
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2019

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81st EAGE Conference & Exhibition, 3 - 6 June, London, United Kingdom. events.eage.org/en/2019/eage-annual-2019

Application Of Computers And Operations Research In The Mineral Industry (APCOM2019), 4-6 June, Wroclaw, Poland. <https://apcom.info/>

CoDaCourse, 1-5 July, Girona. <http://www.compositionaldata.com/codacourses.php>

27th IUGG General Assembly, 8-18 July, Montreal, Canada. <http://iugg2019montreal.com/>

2019 Joint Statistical Meetings, 27 July-1 Aug, Denver, Colorado. <http://www2.amstat.org/meetings/jsm/2019/>

IAMG2019, 10-16 Aug, Pennsylvania, USA. www.iamgconferences.org/iamg2019

62nd ISI World Statistics Congress, International Statistical Institute, 18-23 Aug, Kuala Lumpur, Malaysia.

AAPG International Conference & Exhibition, 27-30 August, Buenos Aires, Argentina. <https://www.aapg.org/events/conferences/ice>

2nd Australasian Exploration Geoscience Conference (AEGC), 2-5 Sept, Perth, Australia. <https://2019.aegc.com.au/>

25th European Meeting of Environmental and Engineering Geophysics, 8-12 Sept, The Hague, the Netherlands, <https://eage.eventsair.com/near-surface-geoscience-2019/25th-european-meeting>

YES Network Congress, 9-13 Sept, Berlin, Germany. <https://yesdeutschland.weebly.com/>

GSA Annual Meeting, 22–25 Sept, Phoenix, Arizona, USA. https://www.geosociety.org/GSA/Events/Annual_Meeting/GSA/Events/gsa2019.aspx

AGU 2019 Fall Meeting, 9-13 Dec, San Francisco, California. <https://fallmeeting.agu.org>

2020

36th International Geological Congress (IGC), 2-8 March, Delhi, India. <http://www.36igc.org/>

SEPM International Sedimentary Geosciences Congress – 2020, 26-29 April, Flagstaff, AZ, USA. <https://www.sepm.org/SEPM2020>

6th International Conference on Geographical Information Systems Theory, Applications and Management, 7-9 May, Prague, Czech Republic. <http://www.gistam.org/Home.aspx?y=2020>

82nd EAGE Conference & Exhibition 2020, 8-11 June, Amsterdam, Netherlands. <https://eage.eventsair.com/82nd-eage-conference-and-exhibition/>

AAPG 2020 Annual Convention & Exhibition, 7-10 June, Houston, Texas, United States. <https://www.aapg.org/events/aapg-conferences/ace/details/ArticleId/51230/aapg-2020-annual-convention-exhibition>

10th International Conference of the African Association of Women in Geosciences, 27 - 31 July, Luanda / Angola.

2020 Joint Statistical Meetings, August 1 - 6, 2020, Philadelphia, Pennsylvania. <https://www.amstat.org/ASA/Meetings/Joint-Statistical-Meetings.aspx>

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Short Courses at IAMG2019

Short Course 1: Introduction to Digital Rock Physics

Short Course 2: Machine Learning for Geoscience Modelling: Introduction and Advanced Topics with Case Studies

Short Course 3: Geostatistics with GeoStats.jl

Short Course 4: Introduction to Stratigraphic Forward Modelling

Short Course 5: Geological Applications of Compositional Data Analysis: A Practical Introduction

Short Course 6: Shale Analytics

Short Course 7: Subsurface Fracture Characterization

Short Course 8: Advanced Stratigraphic Forward Modelling

Field Trips at IAMG2019

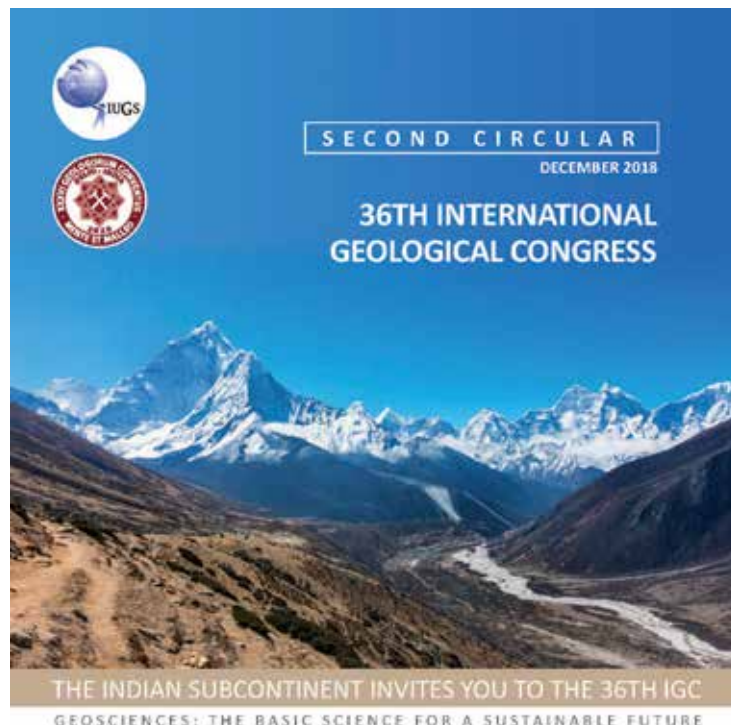
Field Trip 1: Re Farm

Field Trip 2: University Park campus and Berkey Creamery tour

Field Trip 3: Virtual Field Trip in the Immersive Visualization Laboratory at PennState

Field Trip 4: Field Trip to Visit Drilling and Completion Operations in the Marcellus Shale

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or send an E-Mail to:

geomatics@mabb.tu-freiberg.de



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