UPDATES: BOARD NEWS

- The MP&EM premier event Geometallurgy2017 is scheduled for 13 -14 December and papers are being accepted. See page 2.
- Please check your member profile at www.iom3.org/user to make sure that you have the correct preference selected for your technical division. IMMa is no longer available as a preferred technical division, being an umbrella body for the four resources divisions. All members selecting one of the four resources divisions as their preferred technical community automatically become members of IMMa.
- The third Board meeting of 2017 was convened at 297 ER on 28 September.
- The technical journal representing our discipline is IMM, Transactions C published by Taylor & Francis and is free to download. The journal publishes high quality refereed papers at the leading edge of MP&EM, MP&EM Trans C See page 3 for latest edition contents.
- The MP&EM report for 2016 is available to all IOM3 members from the website.
- The CPD facility on the IOM3 website is available for members. See pages 4 and 5.

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NOTES FROM THE EDITOR

Time is running out for the submission of Abstracts for the successful follow up to the Geometallurgy conference to be held at 297 Euston Rd on 13/14 December. More details on page 2.
Is your CPD up to date? Check on page 4.
The discipline of Geometallurgy aims to bridge the gap between geology and metallurgy by developing methods and tools that improve the efficiency of the recovery of metals and industrial minerals. This is achieved by gaining a greater understanding of the properties of the mineral resource, understanding the relationship between the properties of ore types and the planned routes of the processing and extraction operations.

Geometallurgy 2017 will address recent developments in this rapidly evolving discipline. The conference aims to provide an inspirational forum to promote the benefits that geometallurgy can bring to the mining industry.

The conference will also welcome presentations on operating mines and mineral treatment plants.

**Abstract Submission**

Prospective authors are invited to submit abstracts of up to 250 words for consideration for the programme. The abstract must provide sufficient information for a fair assessment including the objective of the paper, the methodology used and the conclusions or results of the work. The abstract must be written in English.

Participants will have the opportunity to share their technical expertise and experiences via formal presentations, informal discussions and a panel discussion as well as an exhibition area.

**The deadline for submission for consideration for presentation has been extended to Tuesday 31 October 2017.**

A dozen submissions have been received for consideration already, so if you would like to present a paper please submit your abstract without delay!

**Prospective attendees and authors will find more details at Geometallurgy Conference or through the IOM3 website**
The new “National Archive of Materials and Mining” was opened on 18 July:

The new library building (Unit 17, 150 yards from The Boilerhouse front door - or barely 100 yards via the fire escape!) is now fully functional with signage, uncluttered space, upgraded photocopying/scanning equipment, and even a temporary assistant busy cataloguing the Tata Steel books but available every day to let people in and help with photocopy requests;

There will be a broader focus on library provision across the range of materials, instead of the Minerals and Mining Library existing as an isolated anomaly.

Frances Perry, of the IOM3 Information Services team, is currently up in Grantham on Mondays and Wednesdays but can generally vary the days to accommodate library visitors. On the information side, software development meetings have predominated. During July and August Frances was involved with Nuna Staniaszek, Director of Communications, developing the specification for a new Materials Information Service enquiry system. Much of the library staff’s time also continues to be taken up with progressing the digitisation of all IOM3 publications from the pilot stage to full scale, from which members should start to see results early in the new year:

* The next pilot batch is ready for loading to OneMine.
* Negotiations regarding IOM3 member access to OneMine are still ongoing.
* Direct member access to scanned IOM3 papers online is due early in 2018; IMM and IMinE papers should thenceforward be added to the IOM3 website and OneMine in parallel.

To enhance the value of IMMAGE as a historical and technical resource, Katherine Williams, Head of Publications is working on keying some of the 1949-1980 card references to IMMAGE. She is currently adding the set of Zambian references. If members would like to nominate for keying any particular processes developed before 1978, or indeed any particular author or geographical area, please let Frances Perry know.

Members who have books they no longer need and would like to donate them to the Library can check through IMMAGE if a copy is already held in the Library. IMMAGE is available for free access to members through the IOM3 website. It is expected that access to OneMine will also be free to members.

**Section C of IMM Transactions Vol 126/4 accessible free for IOM3 members:**

* Solvent extraction of mercury(II) from aqueous chloride solutions using Cyanex 302
* Kinetics of leaching of 20CaO·13Al₂O₃·3MgO·3SiO₂
* Exergy and its efficiency calculations of shaft furnace for sinter pellet production
* Particle-based Sb distribution model for Cu–Pb flotation as part of geometallurgical modelling at the polymetallic Rockliden deposit, north-central Sweden
* Limitation of HPGR application
* Taguchi optimisation of process parameters for electrowinning of praseodymium metal in molten salt electrolysis
* The wear pattern in high pressure grinding rolls
* Novel multi-stage aluminium production: part 2 – experimental investigation on carbosulphidation of Al₂O₃ using H₂S and sodiothermic reduction of Al₂S₃
**CPD for C Engs**

The Engineering Council is becoming more stringent on Chartered Engineers maintaining CPD records that are up to date.

At the present time IOM3 have developed a simple form which C Engs can complete and return to the membership section which is sufficient to comply with Engineering Council requirements. This form is reproduced on the next page of the newsletter.

It is likely that more detailed recording may be required in the future and it is good practice to keep detailed CPD up to date. IOM3 now has a new online system for recording PD and CPD - provided via the Engineering Council’s mycareerpath software, used by many other professional engineering institutions.

To access your own mycareerpath account, log in to the IOM3 website via the Member Login link (top right of any web page) and go to your Member Profile. In the list of "MY PERSONAL LINKS" in the right hand column, follow the link to "PD record on mycareerpath". This software is available to IOM3 members only.

**Board Member: Hylke Glass MIMMM (Vice Chair)**

Prof. Hylke J. Glass is the **Rio Tinto Professor of Mining and Minerals Engineering** at Camborne School of Mines (CSM) since October 2001. His research currently focuses on the development of methods for geometallurgy, the planning of block caving mines, strategies for sensor-based sorting of minerals, selective leaching of metals from ores, online assessment of metal bioaccessibility, and dynamics of post-mining revegetation and terragreening. The research has attracted significant support from the mining industry, UK research councils, and EU funding programmes.

Prof. Glass is currently the Exeter Principal Investigator of two NERC projects:

- 'Beyond Biorecovery: environmental win-win by biorefining of metallic wastes into new functional materials' (B3)
- 'Cobalt: the roles of Geology, Geomicrobiology and Geometallurgy in its mineral formation and recovery' (COG3)

He is the Exeter Principal Investigator of two EU-funded projects

- 'Integrated system for MONitoring and control of product quality and flexible energy delivery in CALCination' (MONICLEC). (EIT Raw Materials)

Prof. Glass lectures MSc students on geostatistics, sampling statistics, and minerals engineering and BEng students on mining and minerals engineering. He supervises PhD and MSc dissertation projects which are often related to industry.
Level 1 Continuing Professional Development Compliance Form

CPD is the process by which an individual maintains and extends their knowledge and skills, which when applied can develop their competence.

Please tick the box(es) below against the class of CPD activities you have undertaken in the last 12 months that have contributed towards maintaining and extending your occupational competence. You do not need to register a tick in every box to be compliant at this level.

IOM3 may seek further information from you as part of an audit process.

- **Work-based Learning (WBL)** – such as informal or formal learning in a new process, regulation, or piece of legislation or new equipment; an organisation specific activity.

- **Professional Activity (PA)** – such as using your expertise to advise or audit other locations or organisations in your supply chain; writing reports or procedures; training or mentoring colleagues, including new members of staff and site visitors.

- **Formal Education (FE)** – which may or may not lead to a qualification; be concerned with technical, management or occupational subject matter.

- **Self-directed/Proactive Learning (SDL)** – includes reading journals and magazines, such as Materials World and Clay Technology; books; papers; and website material.

- **Conferences, Seminars and Workshops (CSW)** – such as attending or giving lectures, presentations, discussions and talks relevant to your job/technical interests.

- **Other activities** – such as participating in the activities of IOM3 or other professional bodies, including membership or accreditation peer review assessment; technical division committee activities; and other groups within the governance structure. Voluntary works such as Young Enterprise or being a STEM Ambassador.

This list of activities is by no means exhaustive and guidance on the suitability of other activities in a CPD context is available from IOM3.

**Name:**

**Membership Number:**

**Grade:**

**Date:**

Please email your completed form to membership@iom3.org with ‘Annual CPD Return’ as the subject heading.
Present at the MPEM Board meeting on 28th September 2017 (left to right):

Dr Vasant Kumar FIMMM, Head of Materials Chemistry in the Department of Materials Science at the University of Cambridge

Dr Mike Butler MIMMM, Director Mining and Minerals, Jacobs, Stockton-on-Tees

Professor Stephen Neethling MIMMM, Mineral Processing, Imperial College, London

Tony Francis FIMMM, Independent Consultant, Board Chair

David Meadows FIMMM, Global Manager of Metallurgy, Bechtel Mining and Metals

Mike Cave FIMMM, Independent Consultant Newsletter Editor, (not in picture)

Professor Gawen Jenkin AIMMM, Mineral Resources Leicester University. (not in picture)

Apologies for absence: Professor John Monhemius and Professor Hylke Glass (Vice Chair)

The Board represents the interests of members in the MPEM division of IOM3. Clearly this relies on members of the division making their concerns known.

Membership of the Board and a link to send an email can be found at the IOM3 website www.iom3.org/MPEM. While you’re there copy the full website address, open the settings menu in your browser and add the address to “open a new tab page” on start-up. This will make it much easier to locate your website!

The MPEM Chairman, Tony Francis’ email address is t.francis@iom3.org and the email for the newsletter editor is on the last page.

The Board meets 3 times a year on the last Thursday in January, May and September at IOM3, 297 Euston Rd, London. The meeting is followed by an IMMa meeting which co-ordinates the activities of the Minerals and Mining Divisions. The MP&EM Chairman attends meetings of the IOM3 Council and ITPB (Industry and Technology Policy Board) giving us a voice in the running of the Institute.
Letters

The Editor welcomes contributions from IOM3 members around the world:

Frank Baker Gerente de Operações in Brazil:

A voice from the past indeed. I remember you from the Rhokana boat club in Kitwe, Zambia. I have been in Brazil a long time now and have made a life out here in this rather chaotic country.

I am still working as you can see. Atenciosamente Frank

Ed: Frank left Zambia in ‘76 to work at Ashanti Ghana and Commonwealth Smelting Avonmouth before moving to South America, where he has lived since 1982 apart from 3 years in Perth, Australia working for Promet Eng (2007-10). He is currently Amarillogold’s representative in all aspects of the pre-feasibility study carried out for the one million ounce Posse project situated in Mara Rosa, Goiás state, Brazil.

Mike Walton, Director Refmet, http://www.refmet.net/ St. Kilda, Victoria, Australia

Hi Mike

Just received the MP&EM newsletter-thank you. My only comment is that the cover photo is unfortunate. I say this as the workers inside the vessel, in process of installing the refractory lining, are not wearing appropriate safety gear! Some have no dust masks, others no hard hat, and some without Hi-Viz. A state of affairs that should not be associated with IOM3.

Dr Chris John, Retired, South Africa

We moved to South Africa in 2010, and after a couple of years in Botswana are back in SA again.

After finishing with ZCCM as consulting met in 1998 I worked with First Quantum for several years, including their acquisition of Nkana and Mufulira. Then I did work for a few different companies in DRC before joining Martin Broome in African Mining Consultants in 2009. I stopped full-time work a couple of years back, but still have several consulting assignments, mostly in DRC, maybe in Zambia. All hydromet these days!

And I recently became a great-grandfather!

I did meet Laurie (Hanschar) a few years ago during a trip to Zambia, he was trying to get cobalt out of the slag cleaning furnaces at Vedanta’s flash furnace in Chingola. Not sure with what success!

Alan Trevarthen Vannes, Brittany, France

Like many from the Camborne area I was raised in an extended family full of men who were overseas mining, and only came home now and then to see their dependants and tell the most adventurous and romantic stories.

As a result I was programmed from birth to go mining and to travel the world. I was lucky. I was born early enough to get the local work experience and be able to go.

Since then the loss of Cornwall’s industry (excluding pasty factories, water colour classes and surfing schools of course) has meant that local youngsters, in the main, don’t get the mining industry experience that lets them travel.

Camborne School of Mines has kept the flame alive — just. Half the girls in the area want to marry one of those students and get away to better climes. Trouble is so few come back to tell their tales to others.

And the media and journalists are ignorant of all this. They spend their time spinning stories from politics in London through drugs in schools to dogs falling down mineshafts
Special Society Report from Australia

Tony Francis (Chair of the MPEM Board) was invited to the wedding of Simon Barnes to Helen Coackley on 17 March 2016 which was held at the rather wonderful “Circa 1876” venue, Pokolbin in the Hunter Valley, NSW, Australia. Simon’s father, David (on right), like Tony read metallurgy at the Royal School of Mines commencing in 1968. They both spent many years working on the Zambian Copperbelt and while Tony returned to the UK David moved to Mount Isa in Australia. Helen is currently Senior Resource Geologist at Glencore’s Mount Isa Mine. Helen’s father, Stephen Coackley is also a mining engineer graduating from Strathclyde University in 1979.

Simon and his friends and colleagues are all Camborne School of Mines graduates working at Mount Isa. Below and from the left are Dylan Ullyett, Mine Engineer Scheduling, Copper Mine; Simon Barnes, Acting Superintendent Diamond Drilling, Raiseboring, Production Drill & Blast, Copper Mine; Daniel Healy, Senior Engineer Orica and David Lafferty, Superintendent Long-Term Planning. David Lafferty was President of the CSMU in 2008.

It was a great day held in one of the major wine producing areas of the world. All four are very much enjoying life in Australia.

It appears that the industry is thriving and our younger colleagues can clearly enjoy a successful career not only in Australia but in many exciting parts of the world.

Please spread the word.

Ed: I worked with Dave Barnes in Mufulira, Zambia, 30+ years ago, small metallurgical world!
WE WOULD LIKE TO HEAR FROM YOU!

We’re always interested in hearing from our members! If you would like to share a story, publish an article or just provide some feedback on the newsletter, please get in touch! All enquiries can be sent to our editor:

Mike Cave

Email: mikecavepyro@gmail.com

HOW DO I JOIN?

Individual membership of the MP&EM Division is achieved by joining the Institute of Materials, Minerals and Mining. You can join IOM3 online at www.iom3.org/join to get immediate access to member benefits, or you can complete our printed membership application form. For details of membership grades and professional qualifications visit: www.iom3.org/membership

Company membership: More information about Industry Affiliate membership and an application form are available at: www.iom3.org/ias