UPDATES: BOARD NEWS

- The MP&EM Premier event Geometallurgy2017 has been re-scheduled for 19-20 April 2018 at 297 Euston Road, the IOM3 London office and papers are still being accepted. The Division is also planning to arrange an event at Trinity Hall, Cambridge, “Future Prospects in Minerals & Metals” later in the year.
- The International Extractive Industry database “OneMine” is now live and available to members, this complements IMMAGE.
- TF chaired a session on Minerals Processing at the 2017 Mines & Technology event in London, part of the well-established Mines & Money Conference. Board members Professor John Monhemius and Dr Chris Broadbent were presenters.
- The General Data Protection Regulation, GDPR becomes law on 25 May and members are advised to familiarise themselves with these - [GDPR Compliance Guide](#)
- Please check your member profile at www.iom3.org/user to make sure that you have the correct preference selected for your technical division.
- The first Board meeting of 2018 was convened at 297 ER on 25 January. Three new members were welcomed to the Board.
- The technical journal representing our discipline is IMM Transactions C and free to download. (Page 4)
- The MP&EM annual report for 2017 is available to all IOM3 members from the website.
- The CPD facility on the IOM3 web site is available for members.

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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 19/20th April More details on page 2.

It has been a long wait but at last OneMine is available on IOM3.org If you haven’t tried OneMine, now is your chance to use it for free as an IOM3 member. Page 3 for details.

We welcome 3 new members to the MPEM Board, see pages 5 to 7.
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 2018 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. 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 networking as well as an exhibition area.

The deadline to submit abstracts for consideration has been extended to Wednesday 28th February.

The programme is filling up so if you would like to present a paper please submit your abstract without delay to h.j.glass@exeter.co.uk or as below. The draft programme is available on the website.

Prospective attendees and authors will find more details at Geometallurgy Conference or through the IOM3 website
Information Services

The main news on the virtual library front is that the long-awaited contract with OneMine is at last completed and signed by IOM3!

To access One Mine login to IOM3.org and click on “My Account”. Access to One Mine is in your “Personal Links”.

At the moment, although OneMine has all the AusIMM, SME, SAIMM and other Institute’s content it only hosts the four pilot items from IMM/IMinE (two Transactions volumes and two conference proceedings). The first main batch, due back from scanning next week, includes Trans IMM A, B and C, 1990-1999 (the issues from 2000 onwards all being available to members already on Taylor & Francis’s web site via the link from the IOM3 site) and also relevant papers from the first volumes of Journal of the Iron and Steel Institute 1869-1875. These will be loaded to OneMine as soon as the remaining metadata – abstracts, keywords etc. – has been added by the library staff over the course of the next few weeks. Meanwhile the next batch to be scanned includes ten years of Mining Engineer (latterly Mining Technology), the Transactions of IMinE, 1988-1997. The plan is to work backwards until all the journals of both former institutions (+ IMEMME, NACM etc.) have been scanned and to do the same in parallel with the conference proceedings and text-books, so that (for example) the 1997 Richard Mozley symposium and memorial volumes, Pyrometallurgy ’95, Hydrometallurgy ’94 and other 1990s proceedings will be scanned and added within the next year or so.

The occasional paper’s copyright is not held by IOM3, papers from government research bodies tend to be Crown copyright and there is sometimes a reprint of a conference paper that originally appeared in a volume from a publisher such as Balkema. We are asking the relevant bodies for permission to include these.

The IOM3 virtual library to contain the digitised publications of all its constituent bodies is planned to come online by the end of March. All relevant technical material from this will have been sent to OneMine. Additional Institute related material such as biographical entries and reports of social events from Mining Engineer and IMM Bulletin will only be added to the IOM3 online library, not to OneMine.

Normal library activity continues with three or four visitors to the minerals and mining library in Grantham over the past four months and a few more in London. The Tata Steel library and other collections are being catalogued, photocopy requests are being dealt with and loans dispatched more speedily than has been the case in the past few years and members are being provided with a good service. IMMAGE continues to have more than 2000 entries added per year and IMM Abstracts continues to be published quarterly.

Last but by no means least, the Engineering Institutions’ Librarians’ Committee organised librarians’ data protection training, pending the introduction of GDPR in 2018. All relevant past records and files, both manual and electronic, together with actions needed to make them fully compliant are being listed. Suppliers are being contacted regarding their data storage and ensuring that access to the new digital library is correctly structured and managed with the appropriate data protection messages inserted in all the correct places.
Section C of IMM Transactions Vol 127/1 accessible free for IOM3 members:

(To access login to IOM3, click on “My Account”, then “Access Online Journals”, then “Get Full Member Access to Journals” to access the Taylor and Francis site.
Navigate to Section C, or “Browse by Subject—Mineral Resources and Eng”)

Contents:

Reductive roasting and ammonia leaching of high iron-bearing zinc calcines
Ning Peng, Bing Peng, Hui Liu, Ke Xue, Dong Chen & Dong-Hong Lin
Lead Author from School of Met and Env, Central South Univ, Changsha, China

Review of applicable desulphurization models for crude ferronickel refining
Alvin Ma, Sina Mostaghe & Kinnor Chattopadhyay
Dept Mat. Sci & Eng, Toronto Univ, Canada.

Reduction kinetics of magnetite concentrate particles by carbon monoxide
Bahador Abolpour, M. Mehdi Afsahi & Mehdi Azizkarimi
Dept Chem Eng., Shahid Bahonar Univ., Kerman, Iran.

HPGR effect on the particle size and shape of iron ore pellet feed using response surface methodology
Armin Abazarpoor, Mohammad Halali, Rasool Hejazi & Majid Saghaeian
Mat Sci & Eng Dept., Sharif Univ. of Tech. Tehran, Iran.

Application of the chloridizing roasting method for the removal of copper and sulphur from copper slags
Lei Li, Jian-hang Hu & Hua Wang
Kunming Univ. of Sci. & Tech., China

The stimulus response of chitosan and its depression effect on talc flotation
Bo Feng, Jinxiu Peng, Wei Guo, Xianwen Zhu & Wanfu Huang
Jiangxi Univ. of Sci. & Tech., Ganzhou, China

Potential utilization of hazardous mining wastes in the production of lightweight aggregates
Hyunsik Park, Minchul Ha, Doyun Shin, Minseok Kim & Il Sohn
MPEM Board

Nine members of the Mineral Processing and Extractive Metallurgy Board attended the 36th meeting held on 25th January at 297 Euston Road, London. Dr Vasant Kumar, Professor Stephen Neethling and David Meadows were unable to attend. Three new members of the Board were present for their inaugural meeting: Dr Chris Broadbent, Dan Goodman and Dr Arun Vathavooran. Their biographies are on pages 6 and 7.
with other Minerals Processors and Metallurgists with his band Bass Metals. They are due to perform again at this year’s SME in Minneapolis. All funds raised go to Charity.

Available on YouTube [https://www.youtube.com/watch?v=jst-oODLeMI&app=desktop](https://www.youtube.com/watch?v=jst-oODLeMI&app=desktop)

**New Members of MPEM Board**

Chris Broadbent BSc, PhD, CEng, CEnv, FIMMM, MAE

Chris studied Geology at the University of Hull obtaining his BSc in 1978 before undertaking a PhD (1983) at the University of Birmingham in the Department of Minerals Engineering (Energy Recovery from Molten Slag).

He has 6 years of research experience in academia (University of Birmingham and University of Aston working on the utilisation of European Pb/Zn/Cu ores as well as the energy recovery from slag – PhD topic – which was part of Prof Noel Warner’s Direct Ore Smelting project and the mineralogy of stony meteorites, before embarking on almost 10 years of industrial research, initially with RTZ in Avonmouth (working on the development of the Imperial Smelting Furnace) and then Shell/Billiton (at Billiton Research Arnhem – working on coal gasification ash and slag chemistry, FeNi smelting research and development of a high temperature oxidative process to treat mercury containing residues).

In 1994 Chris moved into consultancy accepting a position of Principal Scientist within Wardell Armstrong. He headed the SHE (Safety, Health and Environment) Group before appointment as a Director in 2000. He now manages mining and metallurgical projects from the Firm’s London Office.

Chris has been a member of IOM3 (or its forerunners) for almost 40 years, was Official Correspondent for the Netherlands for the IMM, two times past president of the Western Institute of Mining (forerunner of current WIMM) and a council member of the IMM. He is keen to participate more actively in the Mineral Processing and Extractive Metallurgy Board.

Chris is currently Research Director at Wardell Armstrong International Ltd, London.
**Dan Goodman** - Originally from Cornwall, Dan studied as an undergraduate in Chemistry at the University of Bath, before obtaining an MSc in Minerals Engineering from the Camborne School of Mines, graduating in 2013. He specialised in inorganic chemistry whilst at Bath and undertook a final year project at CSM based on process modelling of an Imerys Kaolin operation.

Following university, he commenced work for Jacobs based in the Stockton-on-Tees office as a graduate process engineer. The first 18 months after joining Jacobs were spent gaining a grounding in mineral processing plant design, working on a range of projects from feasibility to detailed design.

Given the opportunity for an international assignment the subsequent two years were spent working on a natural gas project in Oman. Project Engineer for the gas export pipeline and well sites, his time was split between the main project office in Muscat and the construction site in the Omani interior.

Returning to the UK to work in the newly restructured Mining and Minerals department at Jacobs Dan has spent the past year working as a process engineer on dry stack tailings and bulk solids handling projects.

Dan is keen to get more involved in the profession and looks forward to contributing through the MP&EM Board of IOM3.

Outside of work Dan is a keen cyclist with a passion for the outdoors, often found struggling up the hills of the Dales and North York Moors of a weekend.

**Arun Vathavooran** graduated in Mining & Minerals Engineering from the University of Moratuwa Sri Lanka followed by his PhD in Mineral Processing from Nottingham University.

He has over 15 years of experience within the mining industry acquired over engineering, consulting and research roles. His experience includes coal preparation, base metal flotation, gold & silver hydrometallurgy, comminution circuit debottlenecking, and flowsheet modelling and process plant simulation.

He has managed both laboratory and pilot plant test work campaigns for flotation and ultrafine grinding equipment and conducted flotation plant surveys and audits.

Arun has developed conceptual process plant designs for gold and base metal projects and has held responsibility for equipment sizing, selection and plant cost estimation.

Arun is currently working as a consultant metallurgist within the Tetra Tech’s Mining & Mineral division and based in Swindon. His responsibilities include testwork program management, process plant design and delivering the process section of the mining projects ranging from scoping to feasibility study level.
A bit of History

The mine at Broken Hill Division of ZCCM in Kabwe, Zambia closed in the 1990’s, although there is currently a project to recover metals from the dumps. Kabwe’s is one of the most polluted spots on earth, reflecting the lack of investment in pollution control over the years as the profitability of the operation was low. The article below celebrates the 50 year anniversary of the mine’s start up in 1904.

If you have an article or photographs of historical or current interest please send them to the editor (email on last page).
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