UPDATES: MP&EM BOARD ACTIVITIES

- The second MP&EM Board meeting of 2016 was convened at the London offices of IOM3, 297 Euston Road, on 26 May. Professor Hylke Glass adopted the Vice-Chair position on the Board.
- Dr Gawen Jenkin of Leicester University was welcomed to the Board. Dr Jenkin is a geochemist by training and has developed expertise in mineral deposit studies and ore genesis leading a successful group in this field at Leicester. Much of the work is of direct use in assessing metallurgical processing. Dr Jenkin is collaborating with Leicester’s chemistry department on the potential for ionometallurgical processing of ores. Professor Abbott of Leicester gave a presentation on this at the MP&EM Conference held at Trinity Hall Cambridge last December.
- The MP&EM annual report for 2016 is available to all IOM3 members from the web site.
- Tony Francis and Mike Brooks attended the meeting presenting the UK’s Extractive Industry Transparency Initiative report for 2016 on 19 April at the BIS, Westminster.
- The CPD facility on the IOM3 web site is available for members to keep their records updated.
- The Board will be arranging a highly topical and relevant Conference entitled “Emerging Trends in Minerals Engineering” focussed on latest developments in MP&EM to improve efficiency and reduce costs. The event will be held at IOM3 headquarters in London from 12th to 13th December 2016. Submission of abstracts and registration is available through the web site: Click here.
- Those IOM3 members with an interest in MP&EM are reminded that the technical journal representing our discipline is IMM, Transactions C now published by Taylor & Francis and free to download via the web site. The journal publishes high quality refereed papers at the leading edge of MP&EM.
CAMBORNE SCHOOL OF MINES: A MODERN MINING SCHOOL

The mining industry is a global business supplying metals and minerals used for developing infrastructure across the planet, affecting the lives, security and opportunities of all its inhabitants. Trends in exploration show it is increasingly challenging, and costly, to find new high-quality deposits, and the supply of certain commodities is deemed to have become critical. Declining head grades of the ore imply that the scale of mining operations is ever increasing, and more waste is being produced. In parallel, mining is faced with increased regulation, resource nationalism, and conflicts relating to land-use. In this constantly changing world, Camborne School of Mines (CSM) has, for over 125 years, trained engineers who have pursued rich and rewarding careers in the mining industry all over the world. Drawing on state-of-the-art learning and teaching facilities, CSM students can choose to study from a range of undergraduate, postgraduate, and professional courses which cover disciplines across the mining chain.

At a Test Mine located at a short distance from the campus, CSM students are trained to drill, charge, and fire explosives and survey the mine tunnels. The teaching is also informed by the results of interdisciplinary research covering mining engineering, mineral processing, geology, sustainability issues, and remediation. Major CSM research themes in mining include geotechnics, rock mass characterisation and modelling, pit slope stability, underground support design, block caving optimisation, integrated process analysis, and geometallurgy. This is coupled to surveying research which focusses on rapid and remote pit data acquisition, void detection, accident reconstruction, and advanced visualisation. A specific mining research theme focusses on promoting mine safety by considering development and management of a safety culture. CSM’s mining research is complemented by research in resource and energy efficiency, covering resource estimation and mine design, energy efficient comminution, biohydrometallurgy, and process mineralogy from the deposit through to mine waste storage and reprocessing. Mineral processing and geomechanics research projects are carried out in dedicated laboratories, while a host of analytical services are available on site. To support the mining and mineral engineering research, further knowledge of ore deposit formation and efficient mineral exploration is investigated. CSM’s geologists have expertise in a variety of deposits including magmatic, porphyry, Mississippi Valley Type, and critical metal deposits. There is further research into the geology of industrial minerals, construction materials, and gemstones.

To promote sustainable development of ore deposits, research into carbon reduction modelling, climatic change mechanisms over geological time, and climate change resilience in mining operations is undertaken. Given the global focus of CSM’s research and teaching activities, there is significant engagement with the mining industry, governments, international agencies, the broader mining sector, and CSM’s parent organisation, the University of Exeter. These interactions have led to collaborative projects aimed at technical innovation which reduces costs, improves energy and water efficiency, promotes a safety culture, and supports sustainable development of mines and mining communities. With a commitment to delivering real value to businesses through its graduates and research, CSM is looking forward to playing its part well into the future.

Note from Tony Francis, MP&EM board chair: “As we all know, the industry is going through one of its periodic downturns; when the inevitable recovery occurs, there will be a shortage of qualified minerals processors and metallurgists. While CSM is doing its best to prepare for the anticipated upswing in demand, both government and industry need to provide support for CSM and other relevant bodies of learning.”

PROFESSOR HYLKE GLASS
Rio Tinto Professor of Mining and Minerals Engineering at Camborne School of Mines (CSM)
ETHICAL TESTING OF PROFESSIONAL IOM3 MEMBERS

Ethics and the testing of ethical behaviour was the central theme of the first Licenced Membership Assessors forum organised by IOM3 on 26 November 2015. The increased profile of this important issue has come about from changes to the competencies by which the professional engineering qualifications of Chartered Engineer, Incorporated Engineer and Engineering Technician are assessed; these now include a specific competence which relates to ethical behaviour. In addition the ethical behaviour of professional engineers has been a hot topic in the media recently with several front page stories, and it was timely to re-visit this subject to ensure that IOM3 was providing up to date and sufficient advice to its members on ethical issues.

The session was primed with a case study-based presentation from Ian Bowbrick, Director of Professional Development and Membership at IOM3, who outlined both the legal and moral considerations that assessors should consider when pressure testing a professional engineer’s ethical behaviour. This initiated a lively debate with Tony Francis, Chair of the Mineral Processing and Extractive Metallurgy division, leading from the floor. He reminded members of their legal obligations in addition to the need for professionals to educate and ensure that organisations and those aspiring to be professional engineers understand their responsibilities. Those present concurred with this view. Other members drew upon their own experiences particularly when working for non EU companies in countries where the law is not as explicit. Unsurprisingly none had been tempted by the various inducements cited as company rules and the IOM3 Professional Code of Conduct are clear on the matter. However it was agreed that despite these being in place professional engineers do still transgress the boundaries, and there was unanimous support for IOM3 taking a tough line on members who are found to have done so. In terms of testing ethical behaviour as a competency for professional registration, it was agreed that an equally tough approach be taken, assessing it as an absolute with the caveat however that IOM3 should also educate its members. Dr Chris Corti, Chair of the Professional Policy Board who also chaired the Forum, agreed that IOM3 should re-visit its approach to this subject, potentially offering advice to members on ethical issues.

In conclusion those present agreed that the debate had been both fun and informative in terms of the experiences of members from different technical communities, and agreed that IOM3 should seek to repeat the format on different topics.
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:

E.Hosking@hotmail.co.uk

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