Outotec and Western Cape Branch

Outotec is seeking to promote sustainable minerals processing in southern Africa. As a company, selling technology, sophisticated equipment, and plant solutions for minerals, metals, and water processing as well as energy recovery, the company also wishes to inspire the abundant young South African talent to innovate. With this in mind, Outotec has committed funds to the Western Cape Branch as a prize and travel grant. They believe this will showcase the importance of expertise in sustainability, an area that Outotec is passionate about, reflected in their mission statement: ‘Sustainable use of Earth’s natural resources’. Outotec has recognized the value derived from the Western Cape Branch’s focus on tertiary education, and asked the Branch to handle these awards.

Prize for ‘Sustainability in the Minerals Industry’

This annual prize will be awarded to registered students (not confined to the Western Cape) for papers presented and accompanied by a poster at the Branch’s annual conference. To be considered for a prize, an extended abstract and a motivation as to why the author believes his presentation merits the award should be included.

The award will be adjudicated by a panel of judges appointed by the SAIMM, Western Cape Branch, whose decision will be final. For the 2012 event this panel was: Professor Mike Nicol (Curtin University), Richard Beck (SAIMM), and Professor Markus Reuter (Outotec). The finalists were preselected by the SAIMM Western Cape Branch.

The main consideration for the prize is the value of the idea (technologically, economically, socially, and environmentally) and its potential to improve sustainability. Credit will be given for the quality, innovation, and excellence of the project, design, or engineering of the idea. Thus contributions can come from students at any level as long as the abstract, presentation, and poster clearly present the merit dictated by these criteria.

At the 2012 Conference, two prizes were awarded: 1st R10 000 and 2nd R6 000. In future years depending on the standard of the submissions, a 3rd prize of R4 000 will also be awarded.

This year’s winners were:

1st Prize – Michael Kapembwa (UCT) for ‘A study of ice growth mechanisms in electrolyte aqueous solutions’, co-authored by M.R. Pascual and A.E. Lewis, also of UCT. This presentation continues the work of Professor Alison Lewis’s group investigating ice crystallization as a technique to separate salts from brines. Ice growth mechanisms are key factors to control size and morphology in industrial processes, enhancing separation, and giving the possibility to avoid ice scaling formation, inclusions, and impurity uptakes.

2nd Prize – Neehal Mooruth (UCT) for ‘An overview of the integrated managed passive treatment system for the treatment of acid mine drainage (AMD)’, co-authored by R.P. van Hille of UCT. Passive remediation systems are being investigated to provide sustainable, economical, and low-maintenance solutions for AMD. This presentation investigates a system; of a biological sulphate reduction unit and a linear flow channel reactor (LFCR). A novel concept of a floating sulphur bio-film is utilized to convert the dissolved sulphides to elemental sulphur in the LFCR.

Outotec Travel Grant

This award is available to postgraduate students at Universities in the Western Cape towards the cost of attending an international conference.

This year nine applications were received. The official award of the travel prize to IMPC took place at Outotec’s stand at the congress on Monday 24th September 2012. The SAIMM are very grateful to Outotec for their support of the Western Cape Branch.