



Communications

CSIRO awards mathematician for industry engagement

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Mathematician Dr Frank de Hoog was presented with the Sir Ian McLennan Achievement for Industry Award at a ceremony at CSIRO Discovery Centre on Monday 27 July. The award recognises his innovative research into key processes in the manufacturing and mineral processing industries spanning his 30-year career at CSIRO.



Dr Megan Clark awards Dr Frank de Hoog
the Sir Ian McLennan Achievement for Industry medal

CSIRO Chief Executive Dr Megan Clark spoke about the importance of this award in recognising the achievements of CSIRO's collaborations with industry. She recalled having grappled with the concept of gravitational mineral separation herself in her former career as a geologist and how useful it would have been to have Frank's expertise on hand.

Dr Louise Ryan, Chief of CSIRO Mathematical and Information Sciences, spoke about Dr de Hoog as an accomplished mathematician who started his career at CSIRO 30 years ago as an attractive young post doc. Dr Ryan highlighted some of Dr de Hoog's most influential industry career achievements which have consequently translated to billions of dollars in revenue for Australia.

One of Dr de Hoog's most influential projects involved determining the operating parameters of the Kelsey Jig, a centrifugal machine which separates valuable minerals such as tin, gold, copper, iron, lead and nickel from ore.

The Kelsey Jig (an Australian product) is recognised by the mining industry as having the highest separation efficiency of any gravity device worldwide and is

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used in over a dozen countries. In 2006 the Jig was processing a quarter of the world's tin and recovering more than half a billion dollars worth of ore worldwide each year, a true testament to the far reaching global contribution Dr de Hoog has made to this industry.

The Jig's inventor, Chris Kelsey, himself a recipient of a 2004 Warren Centre Innovators' Award, now with Downer EDI Mining Technologies, said that there is no doubt for him that 'Frank de Hoog helped spawn an industry'.

Another career highlight saw Dr de Hoog devise a new approach to coil winding of sheet metal such as steel and aluminium.

The technique improved the metal coils structural integrity during export and the quality of the sheet when uncoiled. This work helped BlueScope Steel improve export opportunities by minimising damage to coils during manufacturing and transportation.

Industry referee Mr Chris Kelsey also spoke about how important his experience was working with CSIRO and Frank for the success of the Kelsey 'centrifugal' Jig. Mr Kelsey also emphasised the long drawn out process from concept to commercialisation and how important it was to have mathematical knowledge applied to the mining industry.

Chairman of the Sir Ian McLennan board of trustees, Mr Charles Allen, Officer of the Order of Australia, presented Dr Louise Ryan with the Sir Ian McLennan Achievement for Industry Plaque on behalf of the Division of Mathematical and Information Sciences. Chris Kelsey and Dr de Hoog's other industry partners, Mr Bogdan Skomra, QLD Alumina, and Dr Daniel Yuen, BlueScope Steel Research, received a medal for their support of innovation in collaboration with CSIRO.



From left: Robin Batterham (Sir Ian McLennan Board of Management), Charles Allen, Frank de Hoog, Chris Kelsey, Megan Clark and Louise Ryan

Dr de Hoog was presented with the Sir Ian McLennan Achievement for Industry Medal as well as a grant to undertake an overseas study visit valued at \$10 000.