

# Research

## CEMI funds research, capacity building

### ■ Research chair in geophysics recruited from Australia

The Sudbury-based Centre for Excellence in Mining Innovation (CEMI) has approved funding for several capacity building initiatives, exploratory projects and research studies.

The primary focus at this stage is the development of the human resources that will be needed to carry out its research mandate, said CEMI president, Dr. Peter Kaiser.

"It's an interesting situation in that we have the money, but the human resources are difficult to get. Industry has a huge need, so when you select a project, do you value the fact that you're training a graduate student, or is it the results that matter?"

CEMI is funding two new research chairs at Laurentian University – one in geophysics and another in deep mining, each at a cost of \$1 million over five years.

A candidate has been recruited from Australia for the research chair in geophysics. Recruiting for the deep mining chair has been more challenging because of the multi-disciplinary nature of the topic, said Kaiser.

"Deep mining could be hoisting, it could be related to seismic hazards, temperature issues, energy, ventilation,

material handling or mining methods, so we'll have to search for the best individual and leave it open."

Several exploratory projects have been approved to help attract graduate students and introduce them to some of the challenges the mining industry is facing.

"If a professor has a good student with a project that fits our perceived need, that's something worthwhile," said Kaiser. "Plus, it builds a relationship with industry, allows the professor and student to understand what the research needs are and builds the basis for future research projects."

Exploratory projects are aimed at fostering an exploration of a research topic. Graduate students are expected to carry out literature reviews, provide an overview of what has been done in the past and work with a representative of industry and a supervising professor to define a research objective.

The next step would be a research project, said Kaiser. "At that stage, we would expect results that have value. The bar is raised. Now, we expect you to perform."

CEMI has committed funds to help kickstart a collaborative graduate curriculum in mineral exploration.

The innovative academic program is designed to attract more graduate geoscience students to Ontario by leveraging the expertise of nine universities.

Funds have also been allocated for several research projects.

Helen Shang, an associate professor



**Dr. Peter Kaiser:** "If you're not attracting graduate students and post docs, you're not going to do any research."

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-Dr. Peter Kaiser, president, CEMI

of chemical engineering and process control, is conducting a study on ventilation modeling and Greg Baiden has received funding for a Smart Rocks project designed to track the movement of the rock mass in a block cave mine (See the Sept. 2007 issue of *Sudbury Mining Solutions Journal*).

Markus Timusk, an assistant professor of mechanical engineering, has received funding for two studies. One will examine the value of insulating mine walls to reduce cooling costs in deep mines. The other will focus on wireless condition monitoring to detect unusual temperatures and vibration in underground operations.

CEMI was established in 2006 with funding of \$10 million from the Ontario government and \$5 million each from

Vale Inco and Xstrata Nickel.

Fednor, the federal government agency responsible for economic development in Northern Ontario, is conducting due diligence on a proposal for \$9.5 million in funding.

"It's important to get the message out that FedNor is fully behind CEMI and is trying to make it happen," said Kaiser. "I'm optimistic, but what if an election is called? That's why we're working night and day to dot every 'i.'"

CEMI's research priorities, established with industry input, include mining exploration, deep mining, integrated mine process engineering, telrobotics and automation and environmental stewardship. ■

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### BRIEFS

#### Goodyear building new North Bay retread facility

Increasing demand in the construction, mining, forestry and recycling industries has allowed Goodyear Canada Inc. to start construction on a new tire retread facility in North Bay.

The new 80,000-square foot building is scheduled to be complete in the fall of 2008. It will be designed for a continuous flow of production.

"Goodyear has been a committed corporate citizen, operating a retread plant in the City of North Bay for the past 21 years," said Glenn Bennett, business centre manager for Goodyear Canada.

"Moving the retread operation into a larger facility reinforces our commitment to the Northern Ontario community."

#### Federated School of Mines appoints executive director

Paul Hébert has been appointed executive director of the Federated School of Mines, a partnership between Northern Ontario's seven post-secondary institutions, the mining sector and Contact North.

Hébert was formerly executive director of the Mining Industry Human Resources Sector Council (MiHR). Over the past 10 years, he has occupied progressively more senior positions with MiHR.

Hébert will work out of Cambrian College's

Sudbury campus.

"Northern Ontario's minerals and metals sector is a significant player on the global stage and offers a myriad of rewarding career opportunities," said Hébert.

"The Federated School of Mines will work to increase awareness and understanding of those opportunities, while ensuring improved accessibility to the high-quality education and training required to work in the modern mining industry."

## Slurry Solutions



Pinch Valves



Pressure Sensors



Flexible Connectors



"Duckbill" Check Valves

Elasto Valve Rubber Products manufactures pinch valves and replacement sleeves, expansion joints, pressure sensors, and check valves. Pinch valves provide an excellent method of controlling flow of various slurries.

Rubber expansion joints provide excellent protection against pipe movement and thermal growth. EVR wafer and threaded type pressure sensors are an ideal solution for pressure monitoring and pump protection.

EVR's product line of elastomeric check valves are a cost effective way of assuring backflow prevention. Typical check valves uses include sewer interceptors, wet wells, outfall pipes and an excellent answer to eliminating stagnation in drinking water reservoirs.



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