

Leading manufacturing engineer to receive PEO Gold Medal

From robotics to microcoolecular research, PEO will recognize engineering excellence in a variety of fields at the 1999 awards gala dinner, to be held April 24 in Mississauga. The Gold Medal, PEO's premier award for distinguished engineering practice and public service, will go to Donald Walker, P.Eng. Walker is president and CEO of Magna International, which manufactures components and systems for the world's major auto companies.

Magna currently employs over 49,000 people in 155 manufacturing facilities in 16 countries. Walker led the company from the edge of financial extinction to its status as a role model of fiscal health with \$10 million in annual sales. He is committed to engineers and technical staff maintaining control of manufacturing divisions since, "technical problems require a technical solution." Walker has also been a strong advocate for technical education in Ontario's school system and the reform of the apprenticeship system. He sits on several boards, including the Ontario premier's jobs and investment board.

PEO Engineering Medals in the Engineering Excellence category will go to Herman Walter, P.Eng., Ross Gillett, P.Eng., and Martin Van Duyn, P.Eng. Henry Ostrowski received an Engineering Medal—Engineering Excellence at a ceremony held in November as part of the Brampton Chapter's AGM.

Walter is president and co-founder of Eastern Power Limited, which has become Canada's largest designer, owner and operator of landfill gas power plants. Two of its Toronto plants earned the city an international award from the United Nations by reducing greenhouse gas. Walter was recently awarded a patent for a process that will recycle and convert 100 per cent of municipal solid waste.

A senior systems engineer at Spar Space Systems, Gillett is honoured for his design projects, including a two-armed, dexterous robot that will be used to maintain equipment on the international space station. He also mentors engineering students and lectures for the University of Toronto's spacecraft design course.

Currently a consultant, Van Duyn has been at the forefront of the development and application of engineering software design tools throughout his career. His finite element analysis software helped develop a new generation of aircraft engines for General Electric.

Now retired from his post as technical director for Domtar Packaging Limited, Ostrowski was a pioneer in Canada's pulp and paper industry, responsible for industry-wide standards and quality control procedures for corrugated products.

Selected for the Engineering Medal—Research and Development, Judit Puskas, P.Eng., is founder of the Microcoolecular Engineering Research Centre, and professor and director of chemical and biochemical engineering at the University of Western Ontario in London. An internationally recognized authority in living polymer engineering and industrial rubber research, Puskas is also holder of the Bayer-Natural Sciences and Engineering Research Council research chair in elastomer technology.

Frank Rovers, P.Eng., president, Conestoga-Rovers and Associates, will receive the Engineering Medal—Management. Rovers combined his engineering background with strong leadership skills to transform what was a small partnership in 1976, to a company that today has more than 850 staff in 30 offices in Canada, the United States, Mexico and the United Kingdom. He is also recognized for community leadership in fundraising for his local hospital, the United Way and Conestoga College scholarship funds.

Cited for his vision and initiative to co-found two gold mining companies that prospered despite industry turbulence, Pierre Lassonde, P.Eng., president of Franco-Nevada Mining Corporation, will receive the Engineering Medal—Entrepreneurship. The two companies run cost-effective operations, ranking them among the lowest-cost gold producers in the world. Lassonde also established and helps fund a special scholarship program at the University of Toronto's mineral engineering department.

Karen Hawthorne

IBM conference promotes "girl power" in IT

More than 600 preteen girls climbed onto their chairs, waved their hands and screamed wildly. It had all the energy of a Spice Girls concert, but the entertainment was a question-and-answer game at IBM Canada's second Women in Technology Conference, held in Toronto on November 5. Here the "girl power" focused on females making tracks in the traditionally male careers of engineering and computer science.

Designed to encourage young women to continue with math and science courses in school and consider careers in the exploding field of information technology (IT), the theme this year was "Jump into IT." Grade 7 and 8 students from 42 schools throughout the Greater Toronto Area and surrounding regions received a hefty dose of inspiration and information about career opportunities from women in the IT field and high school students.

"There are incredible job openings, we just can't get enough people," said keynote speaker Amy Kovarick, a partner in Digital Renaissance, a Toronto-based company that specializes in new media marketing and growth management.

"This is the hot career field for your generation," she told the eager audience, outlining the range of positions at Digital Renaissance alone: usability architects who



Grade 7 and 8 girls are pumped for the Q&A quiz at IBM Canada's Women in Technology Conference in Toronto on November 5.

work on making systems more user-friendly, project managers, software designers, marketing assistants and graphic designers.

The main rewards are job satisfaction and security. "Every day, every week, every year, my job is always changing, and not once have I looked at the clock and been bored,"

she said. "If you have a technology background, you'll be employable for the rest of your life. If you're a software developer, you basically can write your own ticket."

Girls may not think they need to take math and science courses because their interests lie in the arts, Koverick pointed out, but careers in everything from teaching to fashion design will increasingly require technical knowledge. Being familiar with technology, and knowing how to use computers and what they can do for you, will become part of everyone's daily work and home life, she said.

What's stopping women from pursuing IT careers? "There's a clear lack of awareness of future jobs in the next millennium," she said. "Systems analysts, computer engineers—these are skill sets that easily morph into the next set of jobs, not manufacturing or clerical skills."

There are misconceptions about computer technology because of its complexity, said Hamida Meghani, one of three high school students who participated in a panel discussion with women who work at IBM. "Girls are just scared of technology because it seems so big," she said. "It's not like opening a history textbook. Girls feel intimidated."

A Grade 12 student from Nepean, Meghani recently helped form KidsAreIT!, a program that promotes the use of IT among teens. From January to June of this year, 1000 high school students across Canada will create a national multimedia presentation in a technology-based learning environment. For more information, visit the program's website at www.KidsNRG.com.

Although more women than men are enrolled in university programs in general, under 20 per cent are pursuing undergraduate degrees in computer science and engineering. As a result, the Canadian high-tech industry is losing more than half its potential workforce as it competes in one of the fastest growing and most competitive industries in the world. With programs like its Women in Technology Conference, IBM hopes to help solve the problem. Its goal is to have women occupy half of Canada's IT jobs in 20 years. There are plans to take the 1999 conference on the road to other cities and rural areas across Canada.

Karen Hawthorne

Tax relief for Y2K compliance

Small- and medium-sized businesses (SMEs) searching for ways to quash the year 2000 (Y2K) computer bug can take advantage of a new federal tax relief program.

In the program, the cost of new computer hardware and software purchased to replace out-dated, non-compliant systems can be deducted from next year's taxes. To qualify for this deduction, the computer equipment purchased must be Y2K compatible and replace non-compliant hardware and software acquired before 1998. In addition, only new products purchased from January 1, 1998 to June 30, 1999 will be eligible.

The tax relief program is designed to encourage SMEs to get their computer systems ready for next year, and ease the financial burden of purchasing new equipment. It provides SMEs with up to \$50,000 in capital cost deductions for an immediate write-off of 100 per cent.

For more information, see Government of Canada news release No. 98-057 on the Department of Finance website (www.fin.gc.ca), or contact the Ottawa distribution centre at (613) 995-2855.

Susanne Frame

Queen's creates scholarship for mature engineering students

An engineering alumni committee comprising war veterans has created a scholarship program to enable mature students to pursue engineering degrees at Queen's University.

Graduates of the Applied Science Class of 1948-and-a-1/2, the alumni started as mature students themselves. After the Second World War, a significant number of service men applied to university. Queen's engineering class of 1948 was full. Another session began in the summer months, and earned the unique distinction of Class of 1948 1/2.

Through their donations, Class of 1948 1/2 alumni have created the Science 1948 1/2 Mature Student Award, available for the upcoming summer session. It will provide \$50,000 over four years for applicants who demonstrate financial need and potential for academic success. Only those who have been out of school for at least three years will qualify. Other requirements include a sound academic record in either high school or community college and work experience in the engineering field with excellent references.

"Many in our class were World War II veterans, able to attend Queen's only because of financial help from the government," says class member Jack Billingsley, P.Eng., who spearheaded fundraising for the scholarship. "We attribute many of our later successes to the engineering education we received." The goal is to help mature students who, facing financial and often family responsibilities, are under the same duress as were the war veterans when pursuing an education, he says. The class is calling on engineers to identify suitable candidates.

The class set out to raise \$1 million for the fund. But as of August 1998, the fund had reached a potential value of \$1.4 million. For further information about the fund, or to recommend candidates, contact Jim McCowan, P.Eng., associate dean of applied science, by email: mccowanj@post.queensu.ca; or fax: (613) 545-6500.

Susanne Frame

PEO awards program targets high-tech sectors



PEO has revamped its awards program to encourage nominations from such areas of Ontario leadership as manufacturing, telecommunications, bio-engineering and computer science, to

better showcase the profession's growth and diversity.

During the program's 50-year history, the majority of awards have gone to members in traditional engineering disciplines and academe. That's changed for the association's 1999 Professional Engineers Awards program. The program recently underwent a facelift, with a new logo and nomination kit mailed to 100 companies in different high-tech sectors, fresh publicity ads and a telephone campaign by membership volunteers—all to reported success.

"We've tried to beat the bushes to generate award nominations in industry sectors like telecommunications and robotics," says Stephen Jack, P.Eng., PEO director of programs and events.

The campaign wrapped up last October, with 12 nominations considered by the Awards Committee and eight candidates selected and approved by Council in November [see story on p. 14]. Jack says almost half of the potential nominations—about three dozen leads—came from these newer fields.

"These are fast-moving, very innovative companies," Awards Committee Chair John Lipsett, P.Eng., says of companies like Hewlett-Packard, IBM and Magna International, which PEO targeted for participation in the awards. The engineering behind these global heavyweights deserves recognition, he says.

Shown above, the new logo is designed to exemplify this forward-moving trend in a profession that upholds the strong principles of its tradition. It features a sphere representing the head of a figure, symbolizing that engineering is a cerebral calling. The four rings represent the arms of the figure, open and outstretched to welcome change and innovation. They also represent the categories for Engineering Medals (excellence, entrepreneurship, research and development, and management). The inverted cone represents the human body,

focused on achievement of the four rings.

Also new this year, PEO is seeking sponsorship for the gala with corporate tables available with gold, silver and bronze dedications. The benefits of sponsorship include public recognition on event signage, programs and advertising.

The awards gala dinner and presentation

will be held April 24 at the Toronto Airport Marriott Hotel in Mississauga, as part of PEO's annual general meeting. For more information, call PEO's program and events department at (416) 224-1100, ext. 462 or (800) 339-3716.

Karen Hawthorne

Engineering Week puts emphasis on kids

Plans are falling into place for National Engineering Week (NEW) '99 in Ontario, with the focus on kids. NEW '99 celebrations will be held across Canada and throughout Ontario from February 27 to March 7, 1999. Engineering Week in Ontario is sponsored by PEO, Consulting Engineers of Ontario, the Ontario Science Centre and the Ontario Association of Certified Engineering Technicians and Technologists.

From March 1-5, the Ontario Science Centre (OSC) will offer a series of lectures for school classes. Topics will be geared to elementary and high school audiences and drawn from the science and technology curriculum. Students will hear from professional engineers and engineering technicians and technologists about what's behind some of today's technological marvels—robots, holography, satellites, space exploration, bionic hands and microchips, to name a few.

On weekends (February 27-28 and March 6-7) at the Science Centre, there will be fun workshops for kids of all ages. On the first weekend, NEW will hold its 1999 launch and a robot demonstration by high school teams from the Canada First competition. The second weekend will feature a special celebrity science quiz show sponsored by the Ontario Centres of Excellence.

Five Ontario students will experience what it's like to be an engineer during NEW. Winners of the "Engineer for a Day" contest will help build equipment for the international space station, learn about the neutrino, experiment with virtual reality and help design sophisticated robotic equipment.

Starting January 25, youngsters who watch the popular TVOntario program "TVO Kids" will be able to take part in a poster contest by designing their own "crawl space." Many of the posters will be shown on air and displayed at the OSC during NEW. Program hosts, Patty and Joe, will also sign autographs at the Science Centre from 10:00 a.m. to 12:00 p.m. on Saturday, February 27, as part of opening day. During NEW, they will demonstrate engineering feats on air from their TVO Kids headquarters in the "crawl space."

Through the "Engineering in the Classroom" program, engineering volunteers will also visit schools and facilitate hands-on activities, to help students and teachers appreciate the relevance of math and science studies to the real world.

Throughout the province and across the country, volunteers will conduct competitions and demonstrations, stage shopping mall displays, and organize public forums and many other activities to communicate to the public that engineering contributes significantly to the quality of our daily lives.

Alison Piper

Rebuilding history: church restoration project underway

Windsor consulting engineer Norbert Becker, P.Eng., wants to restore a symbol of Canada's connection to the Underground Railroad. President of the Becker Engineering Group, he has stepped in to save the Nazrey African Methodist Episcopal (A.M.E.) Church of Essex County from imminent demolition.

The first black church in southern Ontario, Amherstburg's Nazrey A.M.E. Church was built by black slaves in 1848. The Church's aging stone walls offered shelter for refugees from American slavery in the mid-1880s, serving as the first "station" on the Underground Railroad into Canada for approximately 30,000 runaway slaves.

In 1999, however, the stone walls that once housed slaves are being held precariously by wooden braces. The exterior of the Nazrey A.M.E. Church is quick-



Shown at left, the dilapidated Nazrey A.M.E. Church in Amherstburg awaits funding for restoration.

ly deteriorating and requires immediate repair. The two-layered roof—comprising wood shingles and a second layer of asphalt shingles—has blown away in some spots, leaving the inside of the church and the original pews exposed to rain and snow. "We have to start work on the

church soon," says Becker. "We don't want the water and ice to destroy the structure we already have."

An Ottawa architect, hired by the North American Black Historical Museum, calculated that renovations would cost at least \$3 million if the church were restored as an official heritage site. But after conducting his own investigation, Becker has estimated the church could be restored for approximately \$625,000 with the right combination of government, institutional and private sector contributions.

"I am doing this for myself, my family, my community and my profession," says Becker, who has pledged support from his firm for the project and will volunteer his services as project manager. "It represents a period of North American history that should not be forgotten by future generations." He points out that restoring the Nazrey A.M.E. Church will also raise the profile of the engineering profession in the "best possible way."

Becker plans to start work on the church immediately, but additional funding will be needed to complete the project.

The board of the North American Black Historical Museum has donated \$60,000 from fundraising and private donations. Becker has pledged about \$100,000 worth of cash, labour and materials donated by local businesses and professional engineers and their employers from Windsor and Essex County. He also hopes to receive \$200,000 from the federal government.

In addition, University of Windsor engineering students and St. Clair College technical students will assist local engineers throughout the project, from investigation and design, to construction.

Becker has also requested funding from PEO and the Ontario Association of Certified Engineering Technicians and Technologists (OACETT). OACETT has pledged \$1,000 for the project, and Becker is asking PEO for \$5,000 in funding. PEO Council is expected to make a decision on Becker's request early this year.

Susanne Frame

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