T he faculty is on a roll, its ability to invest, and McGill researchers are making it look good. The growing number of sponsored researchers has enabled the school to invest more in cutting-edge research. Several researchers have been awarded major research grants, and the number of researchers is expected to continue to grow.

Famed automaker Ferrari seeks design help from McGill students

The Italian auto giant asked Albert Ferrari's students to submit concepts for a laptop that would fit in the floor of a Ferrari car, using design principles that had never been applied before. Ferrari had encountered similar design problems when designing its cars. The students came up with some very impressive results. Ferrari engineers are very optimistic about the potential of the project.

Industry collaboration increases safety and profit

A number of companies are working with McGill students to design products and systems that are safer and more profitable. The companies include Shell, Petro-Canada, and BHP Billiton, among others.

 concession to Quebec, the student housing development on 817 Sherbrooke Street West will be completed in 2008. The project is being funded by a combination of government and private funding.

Dear Graduates and Friends,

Dean's REPORT

The Faculty of Engineering has been working hard to improve the student experience. The new student housing development is a significant step forward, and we expect more students to take advantage of the new facilities in the future.

Michael Kalman
Dean, Faculty of Engineering
Avianus engineering, as well as the scholarships and bursaries available to students, are funded primarily by gifts from alumni. For the first year, most money comes from gifts – 75% specifically. For the top applicants, however, even 100% of the costs may be covered. "The cost is an issue for some students,“ says Dean Pierre. "For the latter, under these circumstances, it’s a challenge to balance affordability and access to the brightest and the best." Financial aid becomes critical in the second year, according to Pierre, for the top applicants. For the 15% of students who apply for aid, 75% were eligible for a loan. "That’s a very significant amount,” he says. "We don’t want to lose anyone due to unmanageable debt.”

To improve retention, the University is taking a proactive approach. "We’ve been tracking the students since first-year registration,” says Pierre. "In addition to their academic performance, we also consider their engagement with the University – the student council, student clubs, and the like. This holistic approach helps us identify students who may need additional support.”

The key is to ensure that all students feel welcomed and supported. "We want to create an environment where students feel that they belong,” says Pierre. "This is crucial for their success and for the success of the University.”
Trottier Fuels Aerospace to New Heights

Engineering research can dramatically improve life in regions where innovation is sorely needed. “This year we decided to establish a fund for research in clean fuels for transportation,” said Robert Trottier, chairman and chief executive officer of Bombardier Inc., and fellow at the Faculty of Engineering and the Trottier Institute in Development and Computation in the Science of Faculty. His gift will double the number of graduate positions for the next three years.

Trottier, in the wake of the modern technologies, to see which social and capital responsibility are possible, valuable, and making real differences in the world. He said, because of a new generation of scientific techniques in the past decade, he has been able to build this endowment.

In an interview in Toronto, he said that Trottier was “very happy” to hear that McGill was able to fund this endowment for graduate positions. “There are immensely talented students, and the ability to work on the cutting edge and work on the best projects as part of the world’s top university is a very exciting prospect.”

ATR 2005 is a six-year-old, high-speed research aircraft designed to test new materials and new technologies that could someday be used in the aircraft. The ATR 2005 is expected to be delivered to Bombardier in 2006, and will conduct research in areas such as aerodynamics, materials science, and human factors.

At the core of the endowment, Trottier said, is the ability to attract the most talented students to work on important projects. “This will allow us to have access to the best talent, and work on cutting-edge projects.”

McGill needs to offer incentives to get the most talented students to move to the Departments of Mechanical, Electrical and Computer Engineering, said Trottier. “We have a number of students with excellent potential, but we need to be able to attract them to our institution.”

Trottier alums — Robert Thirsk, BEng’86, DSc’00, Dave Williams, BSc’76, MEng’73, DSc’06. Trottier has donated $10 million to McGill to establish a new endowed professorship in Engineering.
ASSIGNMENT 358024

Trottier Fuels Aerospace to New Heights

Engineering research can dramatically improve its life in regions where most people are less then 6 km rich. An airborne model could at a floating surface and a vegetation load on a vehicle, and be an aerospace engineering problem for the future. The Engineering Faculty is proud to recognize Dr. John Lacroix's contributions to the field of geotechnical engineering through his research on the strength of soils and foundations.

Lars Firing ENGINEERING A BETTER WORLD

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FRESH ACADEMIC FACES

The Faculty of Engineering has welcomed 15 new professors in 2006-2007. Some of their research is already creating a buzz in the Faculty, but these new faces are just a few of our new team.

Keeping alumni informed about who is doing what in McGill Engineering

AROUND AND ABOUT

Keeping alumni informed about who is doing what in McGill Engineering

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Famed automaker Ferrari seeks design help from McGill students

Maxwell M. Kalman
THE GIFT OF A LIFETIME

The auto giant asked Ferrari's students to submit concepts for a Formula One-like that would fit in the rear of a sports car, using design techniques taught at McGill, the foundation of which was a $100,000 bequest to honor the landmark birthday, Kalman will provide the engineering alumni@mcgill.ca
514 398 1371
Montreal, Quebec H3A 2K6
FACULTY OF ENGINEERING

Matching Gifts
If you are an employer with a company with a matching gift program, you can double or even triple your gift for McGill students. Simply ask your employer about their program before making your gift. To receive the company's matching gift, attach the matching gift form to your donation. The form must be completed by the deadline on your donor's calendar. The faculty of engineering will provide you with more information.

FACULTY OF ENGINEERING
McGill Engineering Building Room 387 860 Sherbrooke St. W. Montreal, Quebec H3A 2K6 SH-151 engineering.alumni@mcgill.ca

OPTICAL SYNERGY
Innovative program helps Canadians compete internationally

R ecently, the National Centre of Excellence in Spectroscopy (NCE-Spectroscopy) was awarded $11.9 million in funding by the Canada Foundation for Innovation (CFI) to support the purchase of a revolutionary new instrument capable of dramatically improving the quality of research in the field of optical spectroscopy. The project will be led by a cross-disciplinary team of researchers from the Faculty of Medicine, the Faculty of Engineering, and the John and Patricia Ruddy Laboratory for Cardiovascular Research. The team includes Professors Brian Thompson, John Macdonald, and Christopher Fraser, as well as Drs. James S. O'Keefe and Jeffrey J. Skowronski. The instrument, known as the High-Resolution Fourier Transform Spectrometer (HRTS), will enable researchers to conduct groundbreaking studies in areas ranging from materials science to medicine. The project is being supported by a $4.5 million grant from the Canada Foundation for Innovation, $2.3 million from the Canada Research Chair, and $5 million from the Quebec Government. The remaining $1 million will be provided by industry partners, including Tekmar, Agilent, and HP. The project will create up to 15 jobs and provide training opportunities for up to 20 graduate students. In addition, the HRTS will be available to researchers from other institutions in Canada, allowing for collaborations and knowledge exchange. This investment is expected to have a significant impact on the Canadian research community, and the HRTS will be housed at the John and Patricia Ruddy Laboratory for Cardiovascular Research on the McGill University campus. The laboratory is a hub for research in cardiovascular disease, and the addition of the HRTS will further cement McGill's position as a leader in this field. The project is a testament to the importance of collaboration and partnerships in advancing scientific research, and it will provide a valuable resource for Canadian researchers seeking to make groundbreaking discoveries in optical spectroscopy.
T he faculty has invested in a technology that keeps Ferrari’s mechanical design students connected with the auto giant. As a result, this year’s students will be able to work with world-renowned Ferrari engineers as part of a real-life project.

Maxwell M. Kalman, the oldest living graduate of the Faculty of Engineering, presents Petro-Canada President and Chief Executive Officer Bob Beaton with a McGill jacket following Beaton’s announcement that the nationally-recognized business will provide $1 million in undergraduate scholarships over 10 years.

**Dean’s Report**

The Faculty has also been transformed by the recent success of its researchers, who have seen some amazing new approaches to working in biomedical technology, nanotechnology, environmental engineering, urban design and a host of other important areas. The fact that so many engineering disciplines, including some 25 professors from some of the top institutions in the world, are in the process of adding another 10 new centers in order to reach a complement of 150 is a sign that we are implementing a considerable increase in research activity. Our recruitment successes are a testament to the environment we are cultivating in the Faculty and the University. For instance, the number of new faculty and our research productivity are helping to attract top academic talent. Thanks to a remarkable increase in the quality and breadth of work, the Faculty today has an enviable position in Canada and in the world. We are in a position to attract top academics and to ensure that our students find rewarding careers after graduation.

Many talented people who are interested in our institutions will want to work with us, and our students will want to stay. They will have a chance to learn from the best and to work on challenging and important problems. We are in a position to attract the best and to provide them with the resources they need to succeed.

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