



# BIG THINKING IN ENGINEERING AND COMPUTER SCIENCE





The annual Micro Steam Car Competition challenges students to make cars using a limited amount of fuel. The cars are built from pop cans and other household items.

# UNITED IN CRITICAL THINKING

An interdisciplinary approach at the Faculty of Engineering and Computer Science leads to practical solutions for multi-faceted problems

Technology or infrastructure? Theory or practice? At Concordia's Faculty of Engineering and Computer Science, our students, professors and alumni examine issues from all angles — analytical and intuitive, precise or big picture.

Together, our community collaborates locally, nationally and internationally to generate ideas that build on current thinking. We propose groundbreaking solutions. We refine. We define. We innovate.

Engineering and Computer Science is anchored in interdisciplinary ideas. Our community fosters:

- Devoted professors
- Enthusiastic alumni mentors
- Advanced studies and cutting-edge research
- Accessible, high-quality professional education
- Classmates from around the world
- A focus on sustainability
- Hands-on experience both in and beyond the classroom
- Connection to industry realities through the Industrial Advisory Council.

Through six departments, we provide eight accredited undergraduate programs and 25 graduate programs to some 7,000 students.

Because passionate graduate students spark ideas and advance our society, we offer a robust range of master's and doctoral programs. This commitment shows in our student body, which features an equal share of graduate and undergraduate students. These talented scholars contribute to the quality and quantity of our ongoing research.

We feature 28 research chairs including four Industrial Research Chairs and four Canada Research Chairs. We've bridged disciplines to develop bold ideas in energy, information security, aerospace, transportation, water and high-performance buildings. As a result, Concordia is making important contributions to life in Montreal, Quebec, Canada and worldwide.

Our undergraduate engineering programs are recognized by the Canadian Engineering Accreditation Board, while our computer science programs are certified by the Canadian Information Processing Society.


## ENGINEERING AND COMPUTER SCIENCE AT A GLANCE:

- 22,230 alumni
- 3,750 undergraduate students
- 3,330 graduate students
- 6 departments
- 2 research/training institutes
- 3 Canada Research Chairs
- 20 Concordia University Research Chairs
- 4 other research chairs/special research professorships
- 172 professors
- 82 part-time faculty members

CONCORDIA **first**

The student chapter of the Society of Automotive Engineers (SAE) and its 28-pound Supermileage car win first place in the prestigious student exhibit competition at the 2014 Society of Automotive Engineers World Congress and Exhibition in Detroit. The SAE student chapter has built and raced Supermileage cars since 1986.





“We’re providing the essential elements to a new cohort of student leaders, ensuring they have not only the technical skills, but also the ‘big picture’ understanding needed to tackle the world’s seemingly intractable problems.”

— Deborah Dysart-Gale, associate professor and chair, Centre for Engineering in Society

# WE EXPAND MINDS AND HORIZONS

Our students learn practical skills to approach real-world challenges — big and small, local and global — with innovative solutions

Accessible and quality education is paramount. Our students consistently receive the support they need to learn sound ways of working that will serve them throughout their careers. Concordia offers undergraduate degrees in building, civil, computer, electrical, industrial, mechanical and software engineering as well as computer science.

Research-based master's degrees and PhDs can be obtained in:

- Engineering: aerospace, building, civil, computer, electrical, industrial, mechanical, quality systems and software
- Information systems security

To propel knowledge and technological innovation, our faculty introduced a PhD in Mechanical and Industrial Engineering in 2014. The graduate program is designed to provide students with expertise through intensive research.

Canadian engineers have always worked worldwide. Today, our students, faculty and alumni are connected around the globe. Our engineering and computer science graduate students hail from Quebec, across Canada and from over 150 countries.

## BEYOND THE CLASSROOM

Hands-on learning is one of Concordia's strengths. Our students participate in real-world engineering through student-run engineering projects, working alongside researchers or through our Co-op program. Concordia is a Canadian leader in introducing co-operative education. Every year more than 500 engineering and computer science students participate in Co-op training. They graduate ready to solve problems using academic and real-life work experience, research knowledge and business acumen.

Innovators, entrepreneurs and students converge at District 3. This cutting-edge innovation centre was launched in 2012 to provide a learning environment to incubate new ideas where alumni and industry mentors play a vital role. Students from our faculty and other faculties collaborate on ideas that merit real-world applications. In its inaugural year, a dozen teams brought forth wildly different projects including an inflatable plant-growing bed, a laser-welder and a chair made from electronic fabrics.

## THINKING GLOBALLY

Concordia is the only university in Canada in which engineering students learn key concepts such as social responsibility, ethics and communication within their own faculty through our Centre for Engineering in Society.

Our Global Engineering Initiative offers a multi-sited global engineering course in partnership with other universities, including the Technion in Israel, the Indian Institute of Technology in Bombay and the National Technical University in Taipei. Students benefit from learning different perspectives in very different locations.

Closer to home, engineering students collaborate directly with community clients in Northern Quebec, where they hone their skills in communication and teamwork.

CONCORDIA **first**

The Institute for Water, Energy and Sustainable Systems is first launched in 2012 as a training ground for the next generation of global engineers who will propose solutions to water problems as well as address energy and sustainability issues.



“We developed a model to design rooftop greenhouses attached to buildings so they become net energy producers rather than energy sinks. By careful design and using high quality materials, it’s possible to retrofit existing buildings with greenhouses to generate surplus heat and grow vegetables while offering additional floor area.”

— Diane Bastien, PhD candidate; 2008 Special Entrance Award; 2010 Concordia Special Scholarship for New High-Calibre PhD Student; recipient of the 2011 Prix Acfas (Association francophone pour le savoir); co-author of *The Potential of Solar Energy in Quebec*; recipient of the 2012 Concordia Merit Scholarship



# SUSTAINABILITY IS TOP OF MIND

Our researchers tackle the biggest issues: water, energy and sustainability

The **Concordia Institute for Water, Energy and Sustainable Systems** (CIWESS) trains students to be at the forefront of sustainable development practices. This multidisciplinary program promotes research into new systems, technologies and solutions for water, energy and resource conservation.

Concordia is a leader in renewable energy research. It houses the **NSERC Smart Net-Zero Energy Buildings Strategic Research Network**, which brings together 29 Canadian researchers from 15 universities. This community of thinkers develops smart net-zero energy buildings that can generate as much energy as they consume.


Our commitment to sustainability is to change how we build. The **Centre for Building Studies** conducts research to advance living and working spaces that are more energy efficient, comfortable and healthy.

Concordia's **Solar Simulator–Environmental Chamber** is the only facility of its kind in the world. The facility helps researchers investigate how to harness solar energy and eventually make buildings produce as much energy as they use. Scientists from the Faculty of Engineering and Computer Science also designed the integrated solar panels on the LEED®-certified John Molson School of Business Building, which uses a single facade surface to generate both heat and electricity from the sun.

CONCORDIA **first**

The Faculty of Engineering and Computer Science becomes the first Fair Trade-Certified Faculty in Canada in 2010, thanks to the student chapter of Engineers Without Borders, a non-profit organization supported by professional engineers, students and volunteers.





“We were underslept and putting in 20-hour days, but I don’t think any of the competing teams would have traded in that experience. We’ve learned so much, and this is only the beginning of what we hope to achieve.”

— Nick Sweet, BEng 14, former president of Space Concordia, the winning team at the 2012 Canadian Satellite Design Challenge



# FORWARD-THINKING STUDENTS

Our students are active in peer groups that enrich their university experience and propel research

In May 2012, a group of undergraduate Mechanical and Industrial Engineering students helped construct Montreal's first-ever linear particle accelerator.

The **Engineering and Computer Science Association** includes 11 student societies. For instance, Women in Engineering promotes scientific careers year-round. The Concordia chapter of Engineers Without Borders organizes Global Engineering Week in the atrium of the Engineering, Computer Science and Visual Arts Integrated Complex each March. The student group also works, primarily in rural Africa, to improve quality of life by helping farmers develop strategies or by enabling locals to access clean water.

For decades, the Concordia chapter of the **Society of Automotive Engineers (SAE)** has provided undergraduate students experience in concept development to full-scale machining. In spring 2014, the SAE's Supermileage Car clinched first place in the prestigious Student Exhibit Competition at the SAE World Congress and Exhibition in Detroit, Michigan.

**Space Concordia**, an undergraduate astronautical engineering association, placed first in the 2012 Canadian Satellite Design Challenge. Their winning design, CubeSat, was smaller than a shoebox and at 2.84 kilograms well below the maximum allowable four kilograms. It was big enough to hold sophisticated equipment to orbit Earth 36 times per day and communicate data to a ground station. The group also leads in conceptualizing and implementing projects such as the prototype of a Mars Rover designed to handle the planet's rocky terrain.

At the first **Engineering and Commerce Case Competition** at Concordia in 2014, undergraduate engineering and commerce students from seven Canadian and three international schools joined forces to sharpen their leadership and communication skills.

Students pay it forward by working as mentors or volunteering with various organizations. They receive credit on their co-curricular student record — and help build Concordia's unique culture of co-operation.

## CONCORDIA **first**

The Faculty of Engineering and Computer Science opens Canada's first Solar Simulator — Environmental Chamber in 2011, a unique laboratory that revolutionizes solar energy applications and building standards, thanks to \$4.6 million in government funding.





# WHERE NEW THINKING TAKES FLIGHT

Outstanding facilities and numerous industry partnerships contribute to an ideal environment for aerospace research and training

Montreal is internationally recognized as an aerospace hub and is one of the few cities in the world where a plane can be assembled from the ground up.

With exceptional facilities such as a flight simulator, the Concordia Institute of Aerospace Design and Innovation (CIADI) and numerous industry partnerships, our faculty offers an ideal environment for aerospace research and training. Its expertise includes the:

- Centre for Industrial Control
- Concordia Centre for Advanced Vehicle Engineering
- Concordia Institute of Aerospace Design and Innovation

The Concordia Institute of Aerospace Design and Innovation offers a multi-disciplinary industry environment where top undergraduates participate in industry-driven design and research projects. Each project involves 500 hours per year, supervised by aerospace industry engineers and Concordia professors. Internships in Montreal's aerospace industry, where major firms are partnered with CIADI, are especially prized.

Through regular progress meetings, students share their work and gain exposure to a range of other projects. CIADI has trained over 500 students for the aerospace industry since 2001, and provides state-of-the-art interactive computer facilities and industry hardware.

CONCORDIA **first**

Faculty of Engineering and Computer Science PhD students Fiorenzo Vetrone and Chris Boyer are the first in the world to study particles less than a millionth of a millimetre in size with infrared light and lasers in 2006.



The Ice Runner, built entirely by students, is like a catamaran designed for snow and frozen lakes. The winter vessel is the invention of Xavier-Henri Hervé, BEng 87, founding director of the District 3 Centre for Innovation and Entrepreneurship at Concordia.



# ADVANCED THINKING THROUGH RESEARCH

Our labs are an important training ground for the next generation of innovators

Research is more than a proving ground for new ideas. The Faculty of Engineering and Computer Science serves as an essential training ground for the next generation of problem solvers. Concordia has a proud history of success in applied research and graduate training. We encourage students to collaborate and we provide access to experts. Our “can-do” attitude is contagious.

Our research labs and centres allow students to work with established leaders to further knowledge. Research spans narrow disciplines and opens connections with corporate labs, industry groups and universities across Canada and beyond. A case in point is the Power Electronics and Energy Research Group. The group is researching ways to reduce, if not eliminate, the need for costly permanent magnets in electric vehicles.

**Information security:** Our programs in information security and quality systems engineering, which foster research in the global fight against cybercrime, are internationally renowned. According to Symantec, a Fortune 500 security-software company, cybercrime cost Canadians \$3.09 billion in 2013 alone. Our faculty is well positioned to help reverse this trend. With 20 full-time faculty members and more than 60 graduate students and three laboratories, we offer one of North America’s strongest information security and quality systems engineering programs. Our hubs include the:

- Computer Security Laboratory
- Institute for Information Systems Engineering
- National Cyber-Forensics and Training Alliance of Canada — an external group based at Concordia

**Nanotechnology and materials:** Concordia researchers are developing composite materials that show remarkable promise in lowering the weight of an aircraft, increasing durability, reducing fuel use and cutting overall operational costs.

Synthetic biology, biosensors and other synthetic biological computing devices are investigated at the:

- Concordia Centre for Composites
- Optical-Bio Microsystems Laboratory & ConSiM (Concordia Silicon Microfabrication facility)

One of our innovations is a thumbnail-sized sensor that could have a big impact on fighting ammonia air pollution. The tiny sensor can be attached to a micro air vehicle and flown into areas where ammonia pollution is suspected.

**Computer science and software engineering:** Our faculty is a natural leader in the information age, with strong credentials in both hardware and software. From telecommunications to healthcare, aeronautics, video games and animation, our software engineering graduates find work in a broad range of areas. Computer science graduates are sought for their expertise in communications and online business software — or as programmers and designers for video games and applications.

CONCORDIA **first**

The Institute of Aerospace Design and Innovation is created at the Faculty of Engineering and Computer Science in 2001 as Canada’s first university-based training and work experience institute in aerospace.





# FORWARD-THINKING PARTNERSHIPS

## Industry and government research chairs fund deeper exploration into cleaner, smarter solutions

Thanks to the critical support of industry partners, the Faculty of Engineering and Computer Science advances science for the benefit of society.

- The Natural Sciences and Engineering Research Council, Hydro-Québec, Natural Resources Canada and Régulvar invested \$2 million to launch the Senior NSERC Industrial Research Chair in Optimized Operation and Energy Efficiency: Towards High Performance Buildings in 2012 to help make structures cleaner, greener and smarter.
- The NSERC/Ericsson Industrial Research Chair in Model-Based Software Management was created in 2012 through \$1.5 million from Ericsson and the Natural Sciences and Engineering Research Council to initiate research on how to further optimize software.
- The NSERC/Hydro-Québec Industrial Research Chair in Energy Efficiency in Electrical Machines for Small Scale Renewable Energy Production Systems was launched through a \$2 million grant in 2012. It explores sustainable and affordable energy sources such as biomass, osmosis and small wind.
- The \$2.4 million NSERC Senior Industrial Research Chair in Automated Composites Manufacturing was created in 2012 with additional support from Bombardier Aerospace, Bell Helicopter Textron Canada and Delastek Ltd.
- To increase net-zero energy buildings, the NSERC Smart Net-Zero Energy Buildings Strategic Network housed at Concordia was awarded \$5 million from the Natural Sciences and Engineering Research Council of Canada in 2011.

### CANADA RESEARCH CHAIRS

We also feature Canada Research Chairs. Tier 1 chairs receive \$200,000 annually for seven years, while Tier 2 chairs receive \$100,000 annually over five years.

- The Canada Research Chair in End-User Service Engineering for Communications Networks studies how to expand online network potential.
- The Canada Research Chair in Advanced Antenna Systems investigates how to develop miniaturized antennas for smart phones that can harvest solar energy to recharge batteries and anti-collision radars for vehicles.
- The Canada Research Chair in Thermal Spray and Surface Engineering investigates how energy efficiency can be improved to boost economic growth in the aerospace sector.

CONCORDIA **first**

The Faculty of Engineering and Computer Science introduces Quebec's first program in software engineering in 1997.



“From childhood, I knew I would be an engineer. From about the age of 10 I knew how to repair the TV — the one with the tubes — because I couldn’t bear when it wasn’t working. If a chair broke, or the door, I fixed it.”

— Gina Cody, MEng 81, PhD 89, president of CCI Group, Concordia University Alumni Association  
2011 Alumna of the Year



# BIG-THINKING GRADUATES

Our faculty has produced generations of influential leaders and researchers. Here's a sample of our big-thinking alumni:

- **Ali Arlani**, BEng 79, MEng 80, PhD 86, Assistant Deputy Attorney General, Government of Ontario
- **Riccardo Badalone**, BEng 96, CEO and co-founder, Diablo Technologies, Ottawa
- **Albert R. Carbone**, BEng 81, MEng 84, President, Stelvio Inc., Montreal
- **Corinne Charette**, BSc (electrical engineering) 75, LLD 11, Chief Information Officer, Treasury Board of Canada, Ottawa
- **Dayong Gao**, PhD 91, 2013 Asian American Engineer of the Year
- **Xavier-Henri Hervé**, BEng 87, founding Director, District 3 Centre for Innovation and Entrepreneurship at Concordia
- **Virendra Jha**, PhD (Eng) 82, Vice-President of Science, Technology and Programs, Canadian Space Agency, Montreal
- **Madiha Kotb**, BEng 76, MEng 81, President, American Society of Mechanical Engineers
- **Sudhir Kumar Jha**, MEng 05, 2013 winner, Queen Elizabeth II Diamond Jubilee Medal
- **Dan Leibu**, BSc 95, Chief Technology Officer, Kobo, Toronto
- **Benjamin Mattes**, BCS 00, Producer, Ubisoft Entertainment Inc., Montreal
- **Martin Ouellet**, BEng 91, President and Chief Executive Officer, Genia Inc., Quebec City
- **Fernando Petruzzello**, BEng 84, Chief Executive Officer, Chairman, and co-founder, Mechtronix Systems Inc., Saint-Laurent, Que.
- **Lorenzo Spinelli**, BEng 79, President and CEO, Dairy Division, Saputo, Montreal
- **Claudio Vissa**, BEng 73, CIMA+, Vice-President, Energy, Hydropower and Dams
- **Robert Walsh**, BEng 63, DSc 09, President and founder of Forensic Technology, Montreal

CONCORDIA **first**

In its first venture into artificial intelligence research, Concordia's Faculty of Engineering and Computer Science establishes the Centre for Pattern Recognition and Machine Intelligence, also known as CENPARMI, in 1988.





# JOIN THE THINKING

Whether you are a graduate, donor or friend, join us and share your knowledge with the next generation

## Reinforce the connection:

Our students are connected. You can complete the circuit. Nurturing new talent is the smartest investment any organization can make. When people pull together, every sector of our community becomes more productive and more exciting. Whether you are a graduate, friend or donor, we encourage you to come back to Concordia to share your insights and experience with the next generation of leaders. Here's how:

## Share your time, be a mentor:

Do you recall the challenges you faced as a student? If you attended Concordia as a mature student, you know how much courage it takes to pursue higher education in later life. Or perhaps you came here from somewhere else and can now assist a newcomer to find their way. As a mentor, share your success with a student.

## Meet the next generation:

Remember how it felt to be a recent grad, impatient for the adventure of a new career? Join one of our networking events and share your experience:

- Dinner for Eight brings together students and successful alumni.
- Concordia Speed Networking is a lively event connecting students with the business community and invites experienced alumni to participate.
- Join our Homecoming celebrations and reconnect with fellow alumni, faculty and friends.

## Share your thinking:

GradProSkills offers graduate students and post-doctoral fellows skills to transition into their future career. Become a GradProSkills volunteer mentor and help students gain a solid footing by sharing your hard-earned experience and expertise.

## Bring new ideas to life:

District 3 is where interdisciplinary teams of Concordia undergraduates and graduate students design and prototype entirely new products — their own ideas or creations mandated by alumni, established industry leaders and experts. Catch the excitement by coming on board to coach and mentor one team or more.

## Bring fresh thinking to your company:

Invite our students to come to your company as interns. You'll have access to top-notch talent while providing tangible experience to potential recruits.

Contact us: [alumni@concordia.ca](mailto:alumni@concordia.ca) or 514-848-2424, ext. 8946.

Learn more:

[concordia.ca/alumni](http://concordia.ca/alumni).

CONCORDIA **first**

In 1987, the Department of Electrical and Computer Engineering and the Nanjing Institute of Technology establish the first-ever joint doctoral program between a western university and China.



“Donating to Concordia’s Faculty of Engineering and Computer Science and investing in higher education is important to Mechtronix Systems; it’s an investment for the future that gives students the means to be creative and innovative.”

— Joaquim Frazao, Vice-President, Mechtronix Systems



# THINKING OF OTHERS: TRANSFORMATIONAL GIFTS

Our donors have made an immense difference to the opportunities we're able to provide students and researchers at the Faculty of Engineering and Computer Science. These are some recent champions:

- A major gift from **Susan Raymer**, BA 71, and **Ben Wygodny**, BA 69, in 2014 allowed the creation of the Global Engineering Initiative, which increases opportunities for engineering students to learn about the demands on their profession in a global context.
- **Vigilant Global**, a research and development IT firm where 45 per cent of employees are Concordia graduates, gave \$20,000 to fund scholarships that allow deserving international graduate students to focus on their studies. In 2014, the firm sponsored Concordia's Engineering and Commerce Case Competition.
- Between 2005 and 2014, **Paul Fazio**, a professor in the Department of Building, Civil and Environmental Engineering and founder of Centre for Building Studies, contributed \$370,000 towards the Paul Fazio Endowment that supports undergraduate scholarships in the Building Engineering program.
- Alumnus **Robert Baird** contributed \$20,000 in 2013 to fund the Marie and Bob Baird Endowed Scholarships.
- Graduate **Guy Bourassa** gave \$20,000 in 2013 to propel graduate studies through the Guy Bourassa Graduate Scholarship in Building Engineering.
- **Letizia Ray** gave \$200,000 in 2008 to endow a scholarship in civil, building and environmental engineering in memory of her father, Salvatore Randaccio, an accomplished civil engineer.
- **Cisco Canada** donated over \$400,000 worth of security solutions towards the Cisco Network Security Laboratory at the Concordia Institute for Information Systems Engineering in 2010.
- **Mechtronix Systems** gave \$150,000 in 2009 to transform a basement garage, affectionately called "The Cage" by students, into a gleaming workspace for the Society of Automotive Engineers and other students working on final year Capstone projects. Mechtronix also donated a flight simulator and helped finance a truck that students use for competitions.
- **Hydro-Québec** generously contributed \$320,000 for scholarships and fellowships in 2007.
- From 1998 to 2003, **Norman D. Hébert** and his family gave \$1 million to endow entrance scholarships in engineering and business.
- **CAE**, a global leader in modelling, simulation and training for civil aviation and defence, gave \$100,000 to endow the CAE Scholarships in Engineering Excellence in 2001.
- Alumnus **Albert R. Carbone**, president of Montreal-based software company Stelvio Inc., generously gave \$40,000 in 2001 to endow a scholarship in support of full-time students.
- Aerospace leader **Pratt & Whitney** has supported graduate students by investing \$200,000 in scholarships since 1984.

CONCORDIA **first**

The Troitsky Bridge Building Competition is first introduced in 1985 by the Faculty of Engineering and Computer Science and named after Professor Michael Troitsky. The ongoing international competition invites student teams to build model bridges from popsicle sticks, toothpicks, white glue and dental floss.



From streamlined aero designs to super fuel-efficient vehicles, the Society of Automotive Engineers' (SAE) Concordia chapter gives undergraduate students the opportunity to practice their craft — and has for generations.



# IMAGINE THE POWER OF YOUR SUPPORT

You can help create the conditions for new talents to succeed. Today's students will solve tomorrow's technological challenges and change the shape of things to come

## THINK FORWARD, GIVE BACK

- Contribute to scholarships, bursaries, fellowships or student awards.
- Donate or purchase special equipment, or fund a specific project of your choice that will directly benefit students.
- Enrich library resources available to all: books, software and media.
- Encourage your employer to match your donation.
- Discuss your own ideas — the larger the better — with a development officer, a professor or our dean.

## YOUR SUPPORT ADDS VALUE

Student awards, scholarships and fellowships do more than help talented individuals. New labs and equipment, study spaces, and buildings serve more than the students and researchers who use them. Your gift to Concordia helps us attract and retain innovative thinkers by raising Concordia's research profile, and increasing our ability to raise additional funding from public and private sources.

Increasing our investment in highly capable graduate students — individuals who enrich our community — makes Concordia more competitive on the global stage. Additional support for graduate students goes a long way in empowering our university to recruit worldwide. In turn, individuals of remarkable talent can make a significant contribution in knowledge to Concordia, Montreal, Quebec and Canada.

Your support can help emerging leaders hone vital skills and gain traction for new ideas. Your gift is an investment in every project they do, every problem they solve, every idea they have, every invention and improvement that results from their work. Right here at Concordia — or wherever in the world their success brings them. Just think!

Contact us: [giving@concordia.ca](mailto:giving@concordia.ca) or 514-848-2424, ext. 7328.

Learn more:  
[concordia.ca/giving](http://concordia.ca/giving).

CONCORDIA **first**

The first Exposcience is launched by the Faculty of Engineering and Computer Science in 1983. The annual science fair fosters scientific and engineering interest among Montreal schoolchildren.





# WHY CHOOSE CONCORDIA?

An investment in Concordia is an investment in innovation, sustainability, community — and the leaders of tomorrow

**Our unique environment for learning and research.** Concordia's academic goals are grounded in an ethos of dynamism and social responsibility. This remarkable environment was created in 1974, after merging two proud Montreal traditions — the classic liberal arts education offered by Loyola College and the practical educational opportunities offered to wide audiences by Sir George Williams University.

Today, Concordia is an open and engaged university that encourages its 46,000 students to become active, critical and concerned citizens.

**Our commitment to society.**

Concordia is leading the way to a new kind of university, one that makes higher education accessible. The university shares its ideas through free and open access to scientific findings and seeks ways to make social and economic justice more prevalent. We offer some 500 undergraduate and graduate programs, diplomas and certificates, while maintaining formal ties with more than 100 institutions in 33 countries.

**Our strong academic leadership.**

The Concordia community is proud of its impressive roster of senior faculty, many of them established leaders in their respective academic fields, across the Faculty of Fine Arts, Faculty of Arts and Science, Faculty of Engineering and Computer Science, John Molson School of Business and School of Graduate Studies.

**Our contributions and discoveries.**

Every year Concordia faculty and students are recognized for their accomplishments. Whether they are Rhodes Scholars, recipients of Governor General and Prix du Québec awards or members of the Royal Society of Canada, Concordians are among the celebrated academics in our country. Our contributions and our discoveries change lives.

**Our partnership in Quebec.**

Concordia's value to the Quebec economy is estimated at \$1.3 billion annually. And this doesn't account for the contributions of our 188,000 alumni, 95,000 of whom reside in the university's home province.

Contact us: [giving@concordia.ca](mailto:giving@concordia.ca) or 514-848-2424, ext. 7328.

Learn more: [concordia.ca/giving](http://concordia.ca/giving).

## CONCORDIA **first**

The Faculty of Engineering and Computer Science founds the Centre for Composites in 1979. The Centre is dedicated to research and development in polymers, metals and ceramic matrix or materials of more than one component.

# STRENGTH IN NUMBERS

A portrait of the Faculty of Engineering and Computer Science would be incomplete without a look at the wider Concordia community. Here's a complete snapshot of our students, staff, faculty and alumni:

STUDENTS

80,461

97

RESEARCH  
CHAIRS

20

SENATE-RECOGNIZED  
RESEARCH UNITS:

CENTRE FOR BIOLOGICAL APPLICATIONS OF MASS SPECTROMETRY  
CENTRE FOR CLINICAL RESEARCH IN HEALTH  
CENTRE FOR MICROSCOPY AND CELLULAR IMAGING  
CENTRE FOR NANOSCIENCE RESEARCH  
CENTRE FOR ORAL HISTORY AND DIGITAL STORYTELLING  
CENTRE FOR PATTERN RECOGNITION AND MACHINE INTELLIGENCE  
CENTRE FOR RESEARCH IN HUMAN DEVELOPMENT  
CENTRE FOR RESEARCH IN MOLECULAR MODELING  
CENTRE FOR STRUCTURAL AND FUNCTIONAL GENOMICS  
CENTER FOR STUDIES IN BEHAVIORAL NEUROBIOLOGY  
CENTRE FOR THE ARTS IN HUMAN DEVELOPMENT  
CENTRE FOR THE STUDY OF LEARNING AND PERFORMANCE  
CENTRE FOR ZERO ENERGY BUILDING STUDIES  
CONCORDIA CENTRE FOR BROADCASTING AND JOURNALISM STUDIES  
CONCORDIA CENTRE FOR COMPOSITES  
CONCORDIA CENTRE FOR TECHNOCULTURE, ART AND GAMES  
CONCORDIA INSTITUTE FOR WATER, ENERGY AND SUSTAINABLE SYSTEMS  
HEXAGRAM CONCORDIA: CENTRE FOR RESEARCH-CREATION IN MEDIA ARTS AND TECHNOLOGIES  
KARL POLANYI INSTITUTE OF POLITICAL ECONOMY  
MONTREAL INSTITUTE FOR GENOCIDE AND HUMAN RIGHTS STUDIES

R E V E N U E S

OPERATING FUND 2013

\$430,738,000

SPONSORED RESEARCH INCOME 2012

\$44,816,000

7,230

TOTAL EMPLOYEES \*

\* AS OF OCTOBER 2012

1,641

FACULTY MEMBERS \*\*

\*\* INCLUDES VISITING AND RESEARCH PROFESSORS

188,000

ALUMNI AROUND  
THE WORLD



7,414 GRADUATE STUDENTS

2,368 SCHOOL OF EXTENDED LEARNING STUDENTS

36,460 UNDERGRADUATE STUDENTS

34

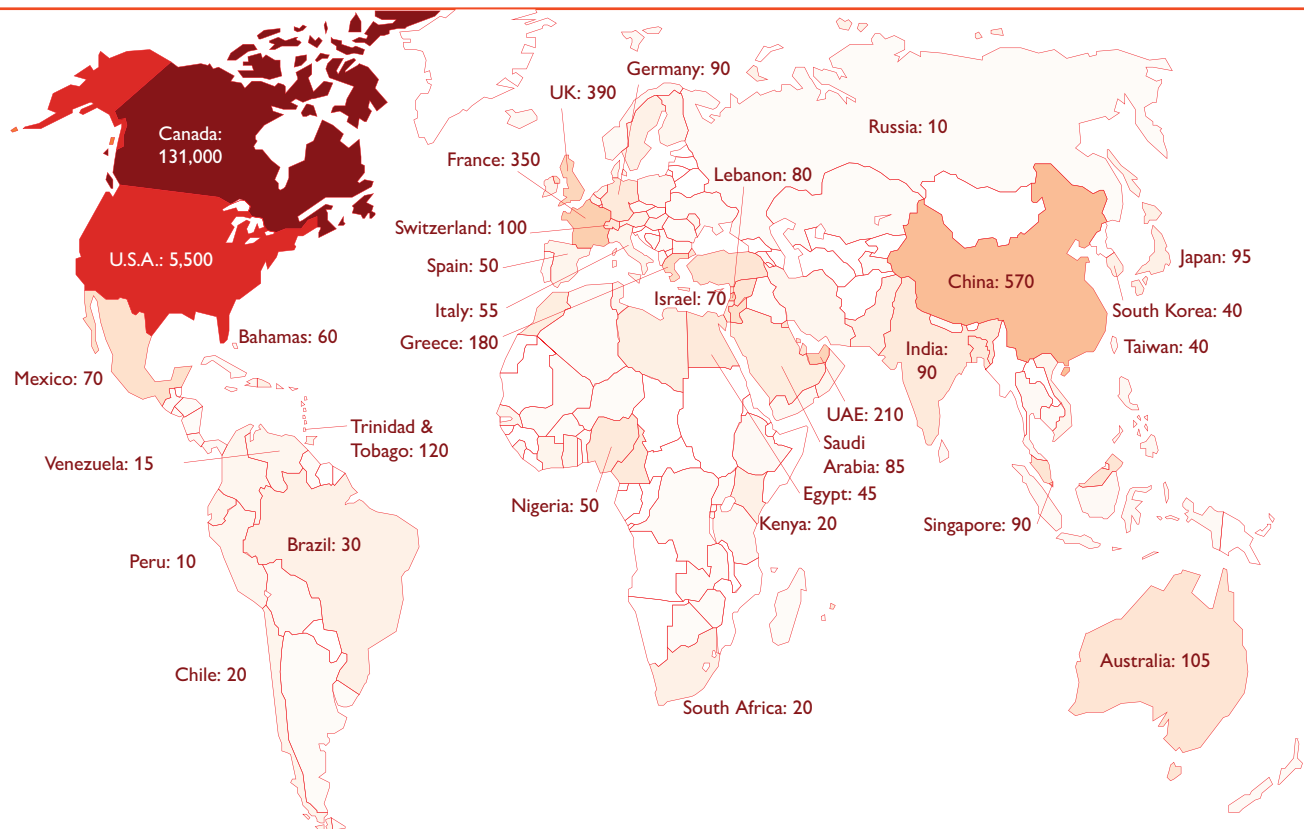
ALUMNI CHAPTERS  
IN CITIES ACROSS  
NORTH AMERICA,  
EUROPE AND ASIA

CONCORDIA'S  
CLASSROOMS  
REFLECT DIVERSITY:

14.4%  
ARE VISA STUDENTS

- Learn about our university's notable leaders, prominent researchers, entrepreneurs, artists, athletes and thinkers at [concordia.ca/greatconcordians](https://concordia.ca/greatconcordians).
- Discover what Concordia achieved first at [concordia.ca/concordiafirsts](https://concordia.ca/concordiafirsts).

## PORTRAIT OF THE CONCORDIA COMMUNITY: SAMPLING OF WHERE OUR GRADUATES LIVE



CONCORDIA **first**

Canada's first building studies program, with a focus on research and the improvement of building practices and materials, is launched by the Faculty of Engineering and Computer Science in 1977.

Learn how you can help Concordia  
nurture talent. Contact our Faculty of  
Engineering and Computer Science  
development staff at  
514-848-2424, ext. 7328.

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SMALL PLANET  BIG THINKING

## JOIN THE CONVERSATION #CUalumni



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Network with fellow  
alumni on LinkedIn  
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Alumni Association](#)



Watch us on YouTube



See the latest event  
photos on Flickr