

## **Biotechnology, Health Research and Medical Devices**

Canada has an established international reputation for its research, scientific and innovation excellence. Canada is a leader in relevant and cutting-edge research, with proven success in discoveries and competencies that drive the international biotechnology product development pipeline. Canada is a model for the world with its exceptional infrastructure, highly competitive regulatory environment and world-class scientific expertise. Canada's health-science research community has more than 30,000 investigators in 16 medical schools, and more than 100 teaching hospitals and research institutes. Canada has particular strength in clinical research, with some of the lowest costs in the world for conducting clinical trials and many internationally-recognized trial leaders.

Canada has established the fastest rate of growth in the number of workers devoted to R&D, in external patent application and in business expenditures on R&D among G7 countries. According to Ernst & Young, Canada continues to have the second highest number of biotechnology companies in the world demonstrating a strong entrepreneurial culture, a supportive business climate and Canada's commitment to growing this vital sector. With some 496 biotechnology companies, Canada ranks second only to the U.S. in terms the size of its biotechnology industry. Canada has a strong foundation of success to build upon in order to remain competitive at the global level. By 2003, annual investment in biotechnology R&D was approaching \$1.5 billion. Canada's volume of discovery and innovation has never been greater. With \$3.8 billion in revenues in 2003, Canada ranks third behind the U.S. and the U.K. in generating biotechnology revenues.

Canada's more than 500 medical device manufacturers constitute a dynamic industry with exports worth \$2.2 billion. The industry is a source of innovative health care products from consumables to sophisticated high technology equipment. Canadian industry strengths include cardiovascular devices, *in vitro* diagnostics, medical imaging, radiation therapy equipment, dental implants/materials, and assistive devices/home care products. Canadian medical device firms benefit from a cost-competitive business environment, world-class medical research, excellent clinical trial capabilities, and a superior quality workforce.

## **The Next Generation Information and Communications Technologies**

Canada is a significant player in the global Information and Communications Technologies (ICT) industry. The Canadian ICT industry is heavily weighted towards leading-edge technologies. Canada has over 32,000 ICT firms and a highly skilled ICT work force of 545,000 people. In field after field, world-leading Canadian ICT innovation is providing solutions for the future, available right now. Today, Canada is a world leader in multimedia and gaming (including animation and special effects), wireless communication, IT security, and software and computer services.

More than 80% of the world's animation and special effects is made possible by Canadian software - and over the past five years, almost every film nominated for an academy award in special effects has relied on Canadian expertise. With credits like Jurassic Park, Terminator 2, The Titanic, Gladiator, Lord of the Rings, and Lion King in Canada's Animation portfolio, it is clear that Canada is a dynamic leader in this ever evolving creative field!

Canada is also recognized for its highly innovative telecom sector. From the days of Alexander Graham Bell to the wireless world of 3G, Wi-Fi and beyond, Canada has been, is, and will be a window into the future of communications. Be it broadband and wireless access, microwave and satellite communications, last mile solutions and much more: Canadian firms are world leaders.

Canada's ICT industry is supported by a cutting-edge research infrastructure. With a rich infrastructure of research institutions, universities and industrial networks, Canada is able to carry out quality ICT R&D from any number of points across Canada. ICT sector R&D expenditures are expected to reach \$5.2 billion in 2005 representing 38% of the total Canadian private sector R&D. Most of Canada's major universities and an increasing number of the community colleges have collaborations with major ICT companies as well as with spin-offs emerging from their own campuses, typically facilitated by well-managed technology transfer functions.

Canada's ICT companies are gathered in regional clusters that provide critical mass that takes advantage of our educational and research infrastructure. For more information on Canadian ICT capabilities, please visit our website:

<http://www.strategis.ic.gc.ca/infotech>.

## **Nanoscience and Nanotechnology: The New Revolution**

Canada is well positioned to be a major player in the commercialization of nanotechnology. Its vast wealth of natural resources has transformed Canada into an affluent high-tech industrial society. Leading sectors in both resource-based industries (minerals, energy, pulp & paper, chemicals, metals, hydro, nuclear), and technology-based industries (telecom equipment, aerospace, transportation, information technology, biotechnology, pharmaceuticals, and phonics) provides multiple entry points for commercial activity with respect to nanotechnology.

Federal and provincials governments in Canada have initiated several funding programs over the past couple of years in order to accelerate the pace of research and development in the field of nanotechnology. These investments have resulted in well funded infrastructure programs as well as nanotechnology activities in all the major universities across the country and within several science-based organizations within the Canadian Government.

Through these various programs, the Canadian government supports fundamental discovery based research, collaborative university-industry research partnerships and the advanced training of Canada's future scientists and engineers. In recognition of the strategic importance and multidisciplinary nature of nanotechnology and nanoscience, within its scientific and engineering community, the Natural Sciences and Engineering Research Council of Canada (NSERC) has created a Nano Innovation Platform (NanoIP) to coordinate Canadian university research in this area. Similarly, the Canadian Institutes of Health Research (CIHR) established a nanomedicine initiative in 2003 to fund interdisciplinary research on the health applications of nanotechnology. This initiative continues to grow each year in scope and level of support.

There are four major geographic clusters of nanotechnology in Canada: Greater Toronto Area, Montreal/Quebec City, Edmonton, and Vancouver. The Edmonton region is now in the midst of developing Canada's foremost cluster in nanotechnology, led by a partnership of the National Research Council (NRC) National Institute of Nanotechnology (NINT) and the University of Alberta. The partnership serves as a powerful platform for recruiting top flight nanotechnology researchers.

Currently, Canada is working on the development of a comprehensive, national strategy in nanotechnology that would be completed by the end of 2005.

## **Sustainable Energy: Renewable and Alternative**

Canada has an abundant supply of various renewable energy sources, including fuel cell, biofuels such as ethanol and biodiesel, wind, solar, hydroelectric and geothermal technologies. With concerns mounting on the impact of our energy consumption on the environment, Canada has made a commitment to increase the use of renewable energy sources as part of a more sustainable energy policy. Recent advances in technology are making renewable energy less costly to implement which just adds to their appeal.

The recognition of the importance of R&D and the need to have a more sustainable energy policy by the Government of Canada has led to the establishment of the Office of Energy Research and Development, which is a funding mechanism for R&D in renewable energy.

The CANMET Energy Technology Centre (CETC) is Canada's leading federal government S&T organization with a mandate to develop and demonstrate energy efficient, alternative and renewable energy technologies and processes. CETC's clean energy expertise includes: bioenergy, solar, wind, geothermal and hydrogen/fuel cell technologies among others. CETC has facilities in Devon, Alberta; Varennes, Québec; and Ottawa, Ontario.

With the help of world leading companies, Canada is a centre of excellence in renewable energy research. Today, hydrogen and fuel cell clusters exist across Canada, though Vancouver, Calgary, Toronto, Kingston and Montreal are five areas that have localized hydrogen and fuel cell technology and infrastructure developments with considerable potential. The largest concentration of fuel cell expertise in Canada is located in the province of British Columbia, where over 1200 people are directly employed in this growing industry. One major project in BC is the Hydrogen Highway. The Hydrogen Highway is a coordinated, large-scale demonstration and deployment program intended to accelerate the commercialization of hydrogen and fuel cell technologies. Another project related to fuel cells and hydrogen is the Hydrogen Village. This is one of Canada's most ambitious demonstration projects. The "village" consists of numerous hydrogen and fuel cell infrastructure hubs throughout the greater Toronto area. One of the goals is to create a successful Hydrogen Village model that can be duplicated in other locations, launching the early establishment of a larger hydrogen infrastructure in Canada and beyond.

## Earth Sciences and Disaster Management and Mitigation Technologies:

Canada's challenging market (large geographic area, small population, extreme climate) coupled with excellent public-private sector partnerships have fuelled Canadian excellence and innovation in geosciences and geomatic applications including those on natural hazard assessment and mitigation. Canada has long been a key international contributor to the development of scientific programs and policies in mitigating natural hazards, public safety and emergency preparedness. In particular, for the past five years, it has been focusing on the creation of disaster-resilient communities, taking a multiple hazards approach and building on existing capabilities. The enhanced consciousness following the December 2004 disaster of the Indian Ocean tsunami combined with a sense of urgency and Canada's activism in international development is creating great opportunities for Canadian expertise worldwide. The Canadian earth sciences community consisting of industry, academia and government is taking part in earth sciences and natural hazards projects around the world and is highly regarded internationally based on its extensive experience and expertise including:

- Canada is a pioneer in earth observation applications, methodologies, products and tools; for example, RADARSAT-1, Canada's own Earth observation satellite, is being used for many applications, including flood monitoring and disaster management;
- Development and deployment of geospatial data infrastructure, which is vital in integrating, interpreting and communicating huge quantities of spatial data;
- Groundwater and terrain sciences, which are crucial in anticipating, preventing and responding to floods;
- Dynamics of slope stability, a vital tool in anticipating the preventing landslides;
- Seabed mapping, which yields important insights in assessing vulnerability to hazards such as storm surges.

Canadian Earth sciences companies are already leaders in the global marketplace having experience working in over 100 countries. Canada offers countries like India a partnership approach to solutions, flexibility, responsiveness and creativity, and a commitment to technological innovation.

### Canada – A Strategic Investment Choice

The government maintains competitive tax rates that make Canada an attractive destination to do business, and provides an array of tax incentives as well as start-up funds for private sector projects. It also helps Canadian businesses to promote their biotechnology products and services, here at home and on the world stage, creating new markets and new jobs. Canada's R&D environment ranks first in terms of cost competitiveness for biomedical R&D compared to other industrialized nations including the U.S., Europe and Japan. Overall, as a location for manufacturing, Canada has the lowest costs to establish and operate a manufacturing facility when compared to all other G-7 countries. Federal taxation offers a 20% non-refundable tax credit for public companies and a 35% refundable tax credit for private companies on current R&D expenditures, including capital expenditures on R&D and machinery and equipment. The Scientific Research & Experimental Development (SR&ED) program provides tax incentives to eligible companies that develop new or improved technologically advanced products or processes in Canada. In terms of investment flows, India's **Foreign Direct Investment** (FDI) in Canada increased from C\$18 million in 1999 to C\$62 million in 2004. Canada's FDI in India increased from C\$247 to C\$251 million from 1999 to 2004.

## **Advancing Science and Technology in Canada: Fostering Research and Development (R&D) Opportunities in Higher Education**

The Government of Canada is committed to making Canada one of the most innovative nations in the world, and has made substantial investments in recent years to create a world-class research environment. Since 1998, annual federal support for research in the higher education sector will be almost \$32 billion, representing a cumulative incremental investment of more than \$11 billion over that period. To sustain the momentum created by previous investments, Budget 2005 provides an additional \$810 million over the next five years to continue strengthening Canada's ability to generate and apply new ideas, and cultivating key enabling technologies.

Canada is a world leader in science and technology and commercialization of research, and its universities, colleges, and technical institutes are important contributors. Nanotechnology, alternative energy and information and communications technologies are but a few of the topics at the forefront of Canadian university research. Domestic spending on R&D was \$24.5 billion in 2004, 1.9% of Canada's GDP. Versus other OECD countries, Canada ranks second in terms of higher education expenditures as a percentage of GDP. Organizations such as the Natural Sciences and Engineering Research Council of Canada (NSERC), the Canadian Institutes of Health Research (CIHR), the Social Sciences and Humanities Research Council of Canada (SSHRC), and the Canadian Foundation for Innovation, provide the grants and other funding required for universities to continue in this critical research, making Canadian higher education institutions an attractive option for highly skilled researchers, graduate students, and public/private partners in Canada and abroad.





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### **Dr. Primal Silva**

#### **Science Director, Food Quality and Nutrition Research**

**Thematic Focus:** Biotechnology, health research and medical devices / Nanoscience and nanotechnology / Other (Agriculture and food)

#### **Description of Organization**

Agriculture and Agri-Food Canada (AAFC) is one of the largest federal government departments. AAFC promotes the development, adaptation and competitiveness of the Canadian agriculture and agri-food sector and helps the sector to maximize its contribution to Canada's economic, social and environmental objectives. The department is composed of several branches (policy, trade, research) that work horizontally through a structure of five teams. Under a team that is specifically focused on international affairs, the Chief Scientist Office is in charge of the promotion and coordination of S&T cooperation with other countries and international organizations. The Office is responsible for the implementation of the International Science Strategy, which emphasizes international partnerships in science to develop new knowledge, to build and access new markets through innovation, to aid developing countries and to contribute to intergovernmental organizations.

#### **Research Interests/Product Development & Business Opportunities**

AAFC has about 600 scientists working in 19 research centres throughout the country. The research priorities are in four areas: sustainable production, with strengths in dairy, wheat, potatoes and canola; health of the environment, with strengths in integrated pest management, biocontrols, emerging diseases, soil and water management, and biodiversity; food safety and quality, with strengths in food processing, dairy and meat products; and bio-products and bio-processes, with strengths in genomic, molecular characterization and detection. Besides scientific expertise and technical support, AAFC facilities include land for crop and animal production; crop, animal and food processing; molecular biology and biocontainment level II microbiology laboratories; milling and baking facilities; state-of-the-art analytical equipment; and access to universities, commercial farms and processing facilities.

#### **International Partners/Alliances**

AAFC has built partnerships with more than 35 countries, including a tetrapartite arrangement with the United States, France and the United Kingdom; a tripartite agreement with the U.S. and Mexico; and recent alliances with China and Israel federal agriculture departments.

#### **Mission Objectives**

Meet with federal and other potential S&T collaborators in the sector of agriculture and agri-food to assess the interest of Indian managers in developing mutually beneficial strategic scientific cooperation in agriculture and agri-food, with the purpose of increasing access to sources of new ideas and emerging technologies, and enhancing AAFC's science and technology capacity.



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**Dr. Ashley O'Sullivan**  
**President and Chief Executive Officer**

**Thematic Focus:** Biotechnology, health research and medical devices / Other (Agriculture)

### **Description of Organization**

Ag-West Bio combines knowledge, expertise and experience to provide a door to Saskatchewan's future growth in the bio-economy. Our experience comes from across the spectrum of life sciences, with management expertise organized along three sectors: agricultural science and technology, health and nutrition, and bio-products and bio-processing.

Ag-West Bio works as a catalyst for industry growth through:

- economic growth and investment
- research and development facilitation
- regulatory and policy development
- business competitiveness
- communication, education and human resource development
- advocacy

### **Services**

Ag-West Bio's many services include several publications aimed at communicating sector issues, trends and opportunities to stakeholders, members and the public to advance Saskatchewan's bio-based economy:

- *AgBiotech Bulletin* – offers the latest news on agricultural biotechnology
- *Bio-Prospect*s – offers the latest news on bio-products and bio-processing
- *NutraNews* – offers the latest news on natural health products and functional foods
- *E-News* – a bi-weekly media monitoring service offered exclusively to Ag-West Bio members

We work to ensure that Saskatchewan is recognized globally as "the" place to do business for the bio-economy.

### **Financial Support**

Ag-West Bio provides direct investment and help in locating matching grants and investments for start-ups or expanding companies. Our funding supports promising technologies at the early stages of development presenting too great a risk for private capital sources. Direct investments range from \$50,000 to \$300,000 and are targeted to research and development projects where a clear pathway to commercialization can be shown.

### **Research Interests/Product Development & Business Opportunities**

India has a relatively cheap, high-quality R&D infrastructure, making it a particularly attractive market. Ag-West Bio is interested in helping Saskatchewan companies research, develop and transfer technologies for the improvement of agricultural practices and for value-added processing in sectors such as nutraceuticals, cosmeceuticals and bio-products. Opportunities exist to build relationships with foreign counterparts for future R&D joint ventures that will enable Saskatchewan companies to access the Indian market with their products and services.

## **International Partners/Alliances**

Ag-West Bio Inc. and the Punjab Biotechnology Park Ltd. of Chandigarh, India, signed a memorandum of understanding (MOU) in 2004 to develop a framework of collaboration for economic, scientific and technological developments in agricultural and environmental biotechnology, bio-processing and health care.

Both parties have agreed to work collaboratively to develop scientific, economic and technical linkages and initiatives for the benefit of both Saskatchewan's life sciences sector and the Punjab Biotechnology Park. These collaborations could include the exchange of information pertaining to business opportunities, transfer of technologies, opportunities for joint commercial ventures and investigation of multilateral funding initiatives. This MOU will help us to develop a sustaining and mutually beneficial relationship in agricultural and environmental biotechnology, bio-processing and health care.

## **Mission Objectives**

Ag-West Bio is attending the Technology Summit to assist Saskatchewan companies in finding R&D partners in India and to source and access new technologies and innovations, resulting in international contacts and market opportunities.



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**Dr. Partha Sarkar**  
**Senior Scientist**

**Thematic Focus:** Other (Commercialization of new technologies)

**Description of Organization**

The Alberta Research Council Inc. (ARC) delivers innovative science and technology solutions to meet the priorities of industry and government in Alberta and beyond. Integrated multi-disciplinary teams help customers and partners take technologies from the laboratory to the field, strengthening their competitiveness and sustainability. ARC accelerates the development and commercialization of products, processes and services in the energy, life sciences, agriculture, environment, forestry and manufacturing sectors. For more than 80 years, ARC has collaborated with business, industry, and academia to foster the economic development and prosperity of Alberta.

**Research Interests / Product development & Business Opportunities**

ARC has demonstrated expertise in the following areas:

- *conventional and non-conventional hydrocarbon and other energy resources* — ARC is developing cost-effective technologies, processes and capabilities for the safe capture, use and storage of carbon dioxide in deep coal seams, saline aquifers and in depleted oil and gas reservoirs.
- *integrated resource management* — sustainable resource development and environmental management.
- *Engineered Products and Services (EPS)* — value-added product and manufacturing process development; ARC's Advanced Materials business unit's expertise includes researching and developing high power-density solid oxide fuel cells and solar energy building product systems.
- *life sciences* — biotechnology-based process development and services for life sciences companies

The sectors we serve include energy, life sciences, agriculture, environment, forestry and manufacturing. Our key lines of business are applied research; technology assessment; technology development and demonstration; technology commercialization; consulting; and testing and analysis. Our global network of partners and alliances has access to a million square feet of specialized bench scale laboratories and pilot scale facilities. Working arrangements, which are flexible and tailored to meet our customers needs, include fee for service, joint ventures, consortia and strategic partnerships.

**International Partners and Alliances**

ARC actively works with more than 100 international partners and clients in R&D and technology development.

**Mission Objectives**

The Alberta Research Council contributes to sustainable prosperity in Alberta by providing innovative science and technology solutions for the current and emerging needs of customers and partners in industry and government.



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**Thematic Focus:** Biotechnology, health research and medical devices

**Description of Organization**

Algonquin College of Applied Arts and Technology is located in Ottawa, Canada and is the third-largest college in Ontario. The College is also well situated in Canada’s capital, which is known as the country’s high technology and telecommunications centre. Algonquin College is recognized internationally as a leader in the field of information technology training. The College is addressing the increasing need, in Canada and internationally, for highly-skilled graduates that have practical experience in technology. Algonquin turns technology to students’ advantage, delivering top-calibre education and valuable experience in high-demand industries. Algonquin College has a diverse population of some 15,000 full-time students and 41,000 part-time registrations in more than 120 programs. As a post-secondary leader, Algonquin is committed to offering students the best education and training for tomorrow’s careers.

**Research Interests / Product Development & Business Opportunities**

Innovation is crucial to Algonquin’s success; the College constantly strives to develop and exploit new technologies to meet the needs of business and industry. Last year, our Research Department developed a low-cost Wi-Fi system that can deliver the benefits of wireless technologies to poor and isolated communities. In addition, Algonquin College took the lead in Canada by opening the first Health Science Simulation Lab. Equipped with computerized mannequins, this leading-edge facility will enhance the approach to health science education in post-secondary institutions.

## **International Partners/Alliances**

Algonquin College is interested in establishing partnerships and strategic alliances with industry partners and organizations. To remain abreast of emerging trends, Algonquin continues to work closely with government partners, as well as a multitude of businesses, community and student groups across Canada and around the world. Algonquin College plays an important role in Canada's multi-ethnic society and export-driven economy, by providing high-quality education to both domestic and international students.

This past year, Algonquin has participated in projects based in China, India, Costa Rica, Nigeria, Montenegro, Poland and Zanzibar, attracting new partners and connecting with international markets. Many countries seek to replicate Algonquin's model of delivering applied vocational training and maintaining close links with local industries and employers. The College has established six partnerships with institutions in India, Montenegro, Egypt, and Costa Rica, and has signed four memoranda of agreement with Chinese institutions to export Algonquin programs.

Whether education is delivered to international students attending Algonquin College or through institutional partnerships and projects abroad, the underlying objective remains the same: to ensure learners develop the competencies, concepts and connections required for success in Canada and around the world.

Algonquin College has collaborated with a number of academic institutions in India, including Animasters School for animation training in Bangalore, the Agnel Technical Education Centre in Goa, the Ranjita Institute of Hotel Management and Catering Technology in Orissa, and our collaboration with the Manav Rachna Educational Institutions (MRES) in the Indo-Canadian School of Advanced Technology, Faridabad, Haryana.

## **Mission Objectives**

Algonquin College has worked in India for many years and understands the strong desire of Indian business and institutions for advanced development and research in the areas of biotechnology and bio-informatics. It is Algonquin College's desire to expand our College's current partnerships and provide training and research opportunities for interested Indian private and non-governmental institutions.

The Algonquin College team members are particularly interested in meeting with a number of Indian companies and academic institutions working in the areas of biotechnology and bio-informatics. Further, the Technology Summit will also offer wide publicity for Algonquin College's Indian campus, the Indo-Canadian School of Advanced Technology (ICSAT) in New Delhi and the Biotechnology Technologist Diploma program offered by ICSAT. The Algonquin team seeks to develop a number of new business partnerships that will facilitate technology transfer in the areas of biotechnology and bio-informatics, as well as showcasing Algonquin's innovation in developing training opportunities for Indian counterparts.



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**Mr. Kok Beng (Peter) Yew**  
**President and Chief Executive Officer**

**Thematic Focus:** sustainable and alternate energy and environmental technologies

### **Description of Organization**

A private company of 10 employees, based in British Columbia, and active in China and Brazil, Aquavive focuses on developing, and commercializing innovative environmental technologies worldwide.

### **Research Interests / Product Development and Business Opportunities**

Our current focus is in commercializing water purification technologies and forming strategic partnerships to finish development of flexible, thin film solar photovoltaic cells for Building Integrated PhotoVoltaic (BIPV) applications using a proprietary nanotechnology platform.

Aquavive manufactures nanomaterial, which encapsulates total dissolved solids (TDS) in wastewater in a process termed Nanocapsulation. The quality of clean water recovered rivals that of reverse osmosis but without its performance limitations. Aquavive has developed a 700 GPD bench model for scalable process equipment and is looking for strategic partners in India to build and install plants for industry ranging from electronics to textiles and tanneries.

Aquavive also has a non-toxic, high-efficiency polyelectrolyte for clarification in biological treatment of wastewater, which is as effective with a dosage of 1 ppm as with 5 ppm of polyacrylamide flocculants from other manufacturers. Aquavive has successfully conducted trials in India and is looking for manufacturing and distribution licensees.

### **International Partners/Alliances**

China: Representative Office  
Crosspan Technologies  
C1608, No. 188, Zhangyang Rd.  
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Brazil: Manufacturing and Distribution Licensee  
Chemical Brasileira Moderna Ltda.,  
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United States: Strategic Partner  
Refinery Science Corp.  
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## **Mission Objectives**

Our main objective is to seek OEMs for water purification process equipment, as well as distributors, process equipment fabricators, strategic investments for BOOT water treatment and purification projects.



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**Dr. Susan Hahn, PhD**  
**Director, Research and Development**

**Thematic Focus:** Biotechnology, health research and medical devices

### **Description of Organization**

ARIUS Research Inc. is a Canadian biotechnology company dedicated to the discovery, development and partnering of novel anticancer monoclonal antibodies (MAbs). ARIUS has built a proprietary technology platform, FunctionFIRST, which rapidly and cost-effectively identifies MAbs targeting a variety of cancer indications. This antibody generation engine has enabled ARIUS to assemble a growing pipeline of 300 functional MAbs, which are used for commercial collaborations, licensing and in-house development. Current research is focused on breast, colorectal, ovarian, lung, pancreatic and prostate cancers. The company's long-term vision is to deliver individualized therapy through groups of monoclonal antibodies. ARIUS is listed on the TSX Venture Exchange under the symbol "ARI".

### **Technology Overview/Business Opportunities**

ARIUS uses a patented discovery platform, FunctionFIRST, to develop monoclonal antibodies from tumor tissues. These (murine) antibodies are screened using proprietary functional assays. Naked antibodies, which kill cancer cells but not normal cells, are selected for progression through the development pathway, including pre-clinical development, antigen characterization and characterization of the mechanism of action. ARIUS has also in-licensed humanization technology. ARIUS uses the platform to discover and characterize novel anti-cancer antibodies for their own pipeline and on behalf of partners. Individual antibodies are also available for licensing.

### **Company Partners**

Oxford BioMedica (Oxford, UK)  
Protein Design Labs (Fremont, CA, USA)  
Medarex (Princeton, NJ, USA)

### **Mission Objectives:**

- strategic research collaborations based on the FunctionFIRST platform
- licensing /partnering for AR7BD-33-11A and ARH460-16-2
- accessing new technologies for target discovery, biomarker discovery and process development/manufacturing



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**Ms. Karen McBride**

**Vice-President, International Affairs**

**Thematic Focus:** Other (Higher Education)

**Description of Organization**

The Association of Universities and Colleges of Canada (AUCC), established in 1911, is the voice of Canada's universities, representing 91 Canadian public and private not-for-profit universities and university degree level colleges. AUCC's mandate is to facilitate the development of public policy on higher education and to encourage cooperation among universities and governments, industry, communities, and institutions in other countries. To foster broad support for higher education, AUCC:

- promotes dialogue with policy makers in Canada
- builds partnerships with local, national and international organizations
- publishes studies on current and emerging trends and issues confronting universities

Each member university of AUCC is represented by its Executive Head. The Association's business is conducted by a board of directors made up of 12 university presidents and the President and CEO of AUCC, Claire Morris. The activities of the Association are coordinated by a Secretariat located in Ottawa.

**Research Interests/Product Development & Business Opportunities**

AUCC members have significant capacity in a number of strategic research areas and have established strong ties with partner organizations in both the domestic and international public, private and not-for-profit sectors to facilitate R&D outcomes. Interested parties can learn more about Canadian universities' R&D engagement, including existing international exchange agreements and institutional contact information, through searchable databases on the AUCC Web site ([www.aucc.ca/publications/database/index\\_e.html](http://www.aucc.ca/publications/database/index_e.html)).

**Partners/Alliances**

As a national advocacy organization, AUCC has a number of Associate Members, including the Canadian Association for Graduate Studies, the Canadian Association of University Research Administrators, the Canadian Federation of Business School Deans, and the Association of Faculties of Medicine of Canada. A full list can be found at the AUCC Web site.

**Mission Objectives**

To represent the S&T interests of Canada's 91 universities and university degree granting colleges; to share information regarding Canadian university research and development capacities and potential for partnerships, exchanges and cooperation; to articulate the role Canadian universities play in advancing national and international research collaboration objectives and goals.



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**Mr. Ed Kennedy**  
**Managing Director**

**Thematic Focus:** Earth Sciences and Disaster Mitigation Technologies

### **Description of Organization**

The Canadian GeoProject Centre (CGPC) is an export business network hub that was established to seek and secure large spatial data infrastructure and spatial information applications projects worldwide. Target clients come from the government, resource development, environment, agriculture, infrastructure, marine and land administration business sectors. CGPC capitalizes on the breadth and depth of geomatics expertise in Canada to tailor solutions for clients. These solutions involve Canadian geomatics companies working with partners from academia, government, foreign countries and the local areas in which projects are developed and implemented. CGPC clients benefit from access to resources, expertise, and sources of financing through a one-stop Canadian solution.

### **Research Interests / Product Development & Business Opportunities**

CGPC is interested in pursuing research and development in spatial data infrastructure (SDI), including constructing and assembling the data, technologies, standards, delivery mechanisms, policies and organizational structures needed to support easy electronic access to and use of geographical information.

Another area of interest is in key spatial information applications, including geomatics and spatial information technologies and services for:

- resource development, monitoring, modelling and management — water, forestry, energy, mining, fisheries and wildlife
- agriculture — precision farming, crop monitoring and forecasting, and irrigation planning
- infrastructure planning, modelling, construction and management — transportation, telecommunications, cable, water, sewer, oil and gas, and power
- land administration — land registry, land titles, cadastre, fiscal cadastre, land use planning and real estate
- environmental monitoring, impact assessment, disaster mitigation and recovery
- municipal management — urban development, urban management, property tax management and utilities management
- marine — coastal zone management, electronic charting and navigation and port management

### **International Partners/Alliances**

CGPC currently has partnerships in several countries:

- India: Centre for Spatial Database Management and Solutions
- Mexico: Centro de Investigación en Geografía y Geomática “Ing. Jorge L. Tamayo” A.C. and Funto Focal, S.A. de C.V.
- Chile: Baird & Associates S.A.
- United Arab Emirates: DBM Computers

## **Mission Objectives**

- to further develop contacts and strengthen relations with key disaster management and mitigation clients in India, such as the Ministry of Science and Technology and the Ministry of Home Affairs
- to pursue negotiations of the agriculture applications project with the planning department of the State of Andhra Pradesh
- to further develop contacts and strengthen relations with the agency responsible for implementing India's national spatial data infrastructure, the Ministry of Science and Technology



**Canadian International Development Agency (CIDA)**

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**Mr. Laszlo Breiner**

**Senior IT/Telecommunications Specialist**

**Thematic Focus:** Other (Information and communications technology to address poverty)

**Description of Organization**

The Canadian International Development Agency (CIDA) is the federal agency charged with planning and implementing most of Canada's development cooperation program in order to reduce poverty and to contribute to a more secure, equitable and prosperous world.



**Canadian Program on Genomics and Global Health**  
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**Canadian Program  
 on Genomics and  
 Global Health**

*Harnessing genomics to improve  
 global health equity*

**Dr. Sarah E. Frew  
 Postdoctoral Fellow**



**Dr. Andrew D. Taylor  
 Scientific Coordinator**

**Thematic Focus:** Biotechnology, health research and medical devices

**Description of Organization**

Located at the Joint Centre for Bioethics, University of Toronto, the Canadian Program on Genomics and Global Health aims to optimize global health benefits and minimize the social risks of advances in genomics and biotechnology through careful evaluation of social and economic impacts.

**Research Interests/Product Development & Business Opportunities**

The mission of the Canadian Program on Genomics and Global Health (CPGGH) is to harness genomics for global health equity. Our research interests are to ensure that developing countries share the social and economic benefits of the genomics revolution, to prevent the emergence of a "genomics divide" and to address the disparities in global human health.

**International Partners/Alliances**

The CPGGH receives most of its funding from Genome Canada through the Ontario Genomics Institute, and the Ontario Research and Development Challenge Fund. Within each of the CPGGH projects, we have developed a wide range of international partnerships.

**Mission Objectives**

Our objectives for this mission are to discuss and develop mechanisms that will encourage and assist increasing partnership between Canadian and Indian biotechnology companies to address the global health challenges of the developing world.



## CANMET Materials Technology Laboratory (Natural Resources Canada)

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Natural Resources  
Canada

Ressources naturelles  
Canada

### **Dr. Sankara Papavinasam Senior Research Scientist**

**Thematic Focus:** Nanoscience and nanotechnology

### **Description of Organization**

CANMET Materials Technology Laboratory (CANMET–MTL) is the largest research centre in Canada dedicated to metals and materials fabrication, processing and evaluation. A technical staff of approximately 140 scientists and technicians, working in 23,000 square metres of well-equipped laboratories, is engaged in a research and development program designed to provide materials solutions for Canadian industry in the energy, transportation and construction sectors.

### **Research Interests/Product Development & Business Opportunities**

Laboratory staff work closely with clients and stakeholders in each of these sectors:

- the transportation industry, particularly vehicle, parts and component manufacturers that use large tonnages of metallic and mineral-based resources
- the construction industry, particularly users of cement and concrete, copper-based alloys for water distribution and construction steel
- segments of the energy industry that use pipelines to transport oil and gas, value-added materials related to fuel cells, and sensors for process control

Furthermore, the Laboratory also studies other aspects of sustainable development, such as achieving process efficiencies and recycling of materials.

CANMET–MTL has particular expertise and facilities for the pilot-scale production and in-depth assessment of novel materials. It houses nationally unique facilities for handling hot and molten metal in pilot-scale quantities in its experimental casting laboratory and metal forming laboratory, as well as for sophisticated and innovative performance assessment for mechanical, corrosion, thermal and electrochemical properties of innovative materials, and for detailed microstructural characterization.

### **International Partners/Alliances**

CANMET–MTL is a signatory to the international Light Metals Alliance, which includes the CAST program (Australia), the LKR Research Centre (Austria), the GKSS Research Centre (Germany) and the Worcester Polytechnic Institute (United States). CANMET–MTL is also Canada's representative on the International Energy Agency's Implementing Agreement on Transportation Materials (sub-committee on Lightweight Materials).

In a multi-partner international project, CANMET–MTL is implementing high-volume fly ash concrete (HVFA) technology in India through a partnership between Canada and the Confederation of Indian Industry. This \$4.2-million HVFA technology transfer project, funded by the Canada Climate Change Development Fund through the Canadian International Development Agency (CIDA), is contributing to India's capacity to reduce greenhouse gas emissions.

CANMET–MTL administers the Canada-wide Nondestructive Testing Certification Program. The Nondestructive Testing Certifying Agency also has signed letters of cooperation with counterpart organizations in South Korea, the People's Republic of China, Japan and the United Kingdom.

Leadership is also provided on the integrity of materials used in oil and gas pipeline infrastructure. Through its coordination of this program, funded by the Program for Energy R&D, CANMET–MTL ensures that federal pipeline regulations, international standards, and advancement of pipeline technologies are based on sound science.

### **Mission Objectives**

To develop and deploy technologies derived from nano-metals and nano-minerals.





**CANTEST BioPharma Services (A Division of CANTEST Ltd.)**

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**Ms. Lorelei Lutter, B.Sc. (Honours), MBA**  
**Director, Business Development**

**Thematic Focus:** Biotechnology, health research and medical devices

### **Description of Organization**

CANTEST BioPharma Services is an FDA-inspected, GLP bioanalytical laboratory focused on analyzing drugs and metabolites in animal and human samples for drug submissions to the U.S., Canada and the EU. Our services include method transfer, method development, method validation and quantitative analysis of small-molecule drugs and metabolites in biological matrices using LC/MS/MS methodologies.

We are a division of CANTEST Ltd., a life sciences company headquartered in Burnaby, British Columbia, Canada. CANTEST provides professional analysis and consultation for companies, governments and individuals in the environmental, biotechnology, pharmaceutical, food safety, forensic equine and industrial hygiene related fields.

Since its inception in 1969, CANTEST has grown to become one of Canada's leading analytical laboratories. CANTEST is a 100 percent Canadian, employee-owned, privately held corporation, with domestic offices in British Columbia, Alberta, Manitoba and Ontario, Canada, and affiliates in Canada, the United States and Southeast Asia.

### **Research Interests/Product Development & Business Opportunities**

CANTEST is interested in pursuing research and business development in the following areas:

- method development, transfer and validation of specific assays using triple-quad LC/MS/MS and LC/MS
- application of validated methods under GLP to support pre-clinical (toxicokinetic) studies and first-in-man (Phase I, IIA) studies
- application of validated methods under GLP to support bioequivalence, bioavailability and drug interaction studies
- specialized consultation for bio-analytical issues

### **International Partners/Alliances**

CANTEST has a number of partnerships with both Canadian and international laboratory service providers, including ENTECH, a full-service environmental analytical laboratory; Transwest Geochem, a firm dedicated to providing creative, cost effective mobile- and fixed-based analytical laboratory and field-sampling solutions; Consolab, a full-service environmental, food and residue testing facility serving Southeast Asia from facilities in Kuala Lumpur, Malaysia; and Prime Trials, a Phase 1 and 2a clinical facility in Vancouver, British Columbia, Canada; Elemental Research, a private laboratory that provides state of the art analytical services for trace metals; and ResearchStream, a marketing alliance of independent research organizations from Western Canada.

## **Mission Objectives**

- to meet with Indian pharmaceutical companies and contract research organizations interested in developing mutual services agreements with CANTEST for the mutually beneficial exchange of technical services
- to promote CANTEST's GLP Bioanalytical Services to all the participants of the Mission and to Indian pharmaceutical companies interested in North American and European Union drug submissions



## Centre for Large Space Structures and Systems (CLS3 Inc.)

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### **Dr. Milind Pimprikar** **Chairman**

**Thematic Focus:** Nanoscience and nanotechnology

### **Description of Organization**

CLS3 is Canada's first initiative for R&D of advanced and innovative technologies for large space structures and related systems.

The recognized pioneer in Micro-Nano-Technologies (MNT) for aerospace and defence applications, CLS3 has undertaken the most ambitious research program for development of MNT-based devices and systems. On behalf of the Canadian government, CLS3 chaired the Task Group on "MNT for Space" to create near-term and long-term strategy and vision.

Internationally, CLS3 is well known, having launched and established the first collaboration between key organizations from Canada, Europe and the United States in this field, which contributed to creating CANEUS ([www.caneus.org](http://www.caneus.org)).

The CANEUS organization caters primarily to the needs of the aerospace and defence community by fostering the coordinated international development of MNT for aerospace applications. CANEUS aims to maximize the number of MNT technologies transitioned from concepts to systems.

CANEUS seeks to:

- provide a platform for the coordinated investment and development of MNT by identifying and nurturing complementary core competencies within government, private sector and academic organizations from the participating countries
- implement the coordinated investment and development strategy through cost-effective means and mechanisms for the rapid infusion of new MNT-based devices and systems for aerospace applications
- provide a forum for the dissemination of technical and programmatic information relevant for the infusion of aerospace MNT by hosting periodic conferences as well as by publishing literature that is considered worthwhile by the membership

### **Mission Objectives**

Through this mission, CLS3 and CANEUS intend to enhance cooperation and collaboration with counterparts from the Netherlands, Italy and the United Kingdom for investment and development of MNT for aerospace applications.



**Children's Hospital of Eastern Ontario- Research Institute**

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**Dr. Alex MacKenzie**  
**Professor, Faculty of Medicine (University of Ottawa)**

**Thematic Focus:** Biotechnology, health research and medical devices / Other (research institute)

**Description of Organization**

The Children's Hospital of Eastern Ontario Research Institute (CHEO RI) is a pediatric hospital-based research institute, affiliated with the University of Ottawa, with over 200 health professional investigators. Located in Ottawa, the CHEO RI is involved in more than 60 clinical trials (Phase I to Phase IV) at any given time. In addition, benchtop research activities account for another considerable number of the over 160 publications generated annually.

The Institute focuses on excellence in research and fosters multi-disciplinary partnerships, continued mentoring and the pursuit of unique opportunities presented by the hospital's expertise and the population it serves. CHEO RI also promotes collaborative research outside the hospital, with partners in the immediate community, industry and the international scientific world.

CHEO RI programs include: Clinical and Epidemiology Research, Mental Health and Health Sciences Research and Molecular Biomedicine. Investigators in the Institute are best known for groundbreaking work identifying genes associated with myotonic dystrophy, spinal muscular atrophy and programmed cell death as well as leading edge research in the field of meta analysis. Clinical trials expertise exists for pharmaceuticals, therapies and medical devices.

The core research strengths at the CHEO RI revolve around the pediatric nature of the hospital. These include emerging concerns of obesity and co-morbidities in the young, the use of complementary and alternative medicine, pediatric bone health, emergency medicine protocol assessments and development, youth depression, developmental disorders and genetic disorders. In addition, the research strengths extend beyond the pediatric realm, particularly in the areas of apoptosis research, systematic reviews and standardization, clinical drug development, infectious disease and vaccine research and nursing research. Key information technology innovations include the development of artificial intelligence in the Neonatal Intensive Care Unit, mobile emergency triage and the safety and integrity of electronic medical data in general.

**Affiliated Spin-off Companies**

Partnering, collaboration and investment opportunities currently exist in the following CHEO RI affiliated spin-off companies:

- Aegera Therapeutics Inc./Aegera Oncology Inc. ([www.aegera.com](http://www.aegera.com)) — focused on exploiting apoptosis control to extend and enhance life, killing cancer cells from chemotherapy-induced death
- Variation Biotechnologies Inc./VBI ([www.variationbiotech.com](http://www.variationbiotech.com)) — dedicated to developing vaccines and immunologics to conquer viral infections, and antigenic variation using novel technologies that overcome genetic variability and mutations in viruses

**Clinical Research Facilities and Services**

The CHEO RI benchtop to bedside approach is enhanced through co-location with one of only two freestanding pediatric hospitals in Canada. The Children's Hospital of Eastern Ontario is a 150-bed facility that sees over 6,000 inpatients and over

185,000 outpatients annually. Clinical research facilities at the hospital include inpatient units and outpatient clinics for Phase III trials, observational studies and surveys.

The CHEO RI occupies approximately 45,000 square feet in two modern buildings adjacent to the hospital. Twenty-five thousand square feet of wet laboratory space houses principal investigators working in areas including infectious diseases, vaccinology, neuromuscular diseases, apoptosis, diabetes and gastroenterology, and includes the Apoptosis Research Centre. The balance of the space is occupied by investigators working in a wide range of pediatric research including clinical research, epidemiology, audiology, speech pathology, bone health, endocrinology and psychology.

### **Partnerships and Alliances**

CHEO RI has a number of international business and industry funding partners, including large corporations such as Abbott Laboratories, Aventis Behring, CHIRON, Bayer, Baxter, Eli Lilly, Fujisawa, GlaxoSmithKline, Johnson and Johnson, Merck Frost, Pharmacia, Hoffman Laroche and Wyeth Ayerst.

In addition, key affiliations exist with international, federal and provincial research and academic institutions, including the CHEO Foundation, the University of Ottawa, the Ottawa Health Research Institute, the Canadian Foundation for Innovation, Canadian Institutes of Health Research, Genome Canada, the Ontario Ministry of Health and Long Term Care, the National Institutes of Health (U.S.), the Agency for Healthcare and Research Quality (U.S.), the Canadian Coordination Office of Health Technology Assessment, the Hospital for Sick Children Foundation, Cochrane Collaboration, the international CONSORT Group, Ste. Justine Hospital, Robarts Research Institute, the Muscular Dystrophy Association, Families of Spinal Muscular Atrophy, Association Française contre les myopathies, the Ottawa Pediatric Rehabilitation Research Alliance, and the Provincial Centre of Excellence for Child and Youth Mental Health.



**Communications Research Centre Canada**

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Communications  
Research Centre  
Canada

Centre de recherches  
sur les communications  
Canada

**Dr. Veena Rawat  
Acting President**

**Thematic Focus:** The Next Generation of Information Technologies

**Description of Organization**

An agency of Industry Canada, the Communications Research Centre Canada (CRC) is responsible for conducting applied research and development in communications and related technologies. Its mission is to be the federal government's centre of excellence for communications R&D, ensuring an independent source of advice for public policy purposes.

The CRC aims to help identify and close the innovation gaps in Canada's communications sector by:

- engaging in industry partnerships
- building technical intelligence
- supporting small and medium-sized high-technology enterprises

The CRC provides national leadership in collaborative research and development on innovative communications, broadcasting and information technologies for a strong Canadian knowledge-based economy.



## **Concordia University (Faculty of Engineering and Computer Science)**

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**Dr. Rama B. Bhat**

**Professor and Associate Dean, Faculty of Engineering & Computer Science**

**Thematic Focus:** Other (Education and Research)

### **Description of Organization**

The Faculty of Engineering & Computer Science at Concordia University offers doctorate degrees in Building Engineering, Civil Engineering, Computer Science, Electrical and Computer Engineering, and Mechanical Engineering. It offers master's degrees in Computer Science, Applied Science in Building Engineering, Civil Engineering, Electrical and Computer Engineering, Information Systems Security, Mechanical Engineering, Quality Systems Engineering, Applied Computer Science, and Engineering in Aerospace, and it offers a Diploma in Computer Science. The Faculty also offers graduate certificates in Building Engineering, Environmental Engineering, Mechanical Engineering, Network Management and Service Engineering, Software Systems for Mechanical and Aerospace Engineering, Software Systems for Industrial Engineering, and User Interface Design for Software Systems.

### **Research Interests**

#### **Building, Civil and Environmental Engineering**

There are modern research and teaching laboratories for building enclosure, indoor air quality and ventilation, building science, acoustics, thermal analysis and thermal insulating materials, energy conservation, building materials, building aerodynamics, computer-aided engineering, construction engineering and management. Instrumentation and calibration facilities are also provided, and a two-storey prototype laboratory is available to accommodate full-scale assemblies used in research projects.

#### **Electrical and Computer Engineering**

The Department is involved in the following areas of research: systems, control and robotics; circuits and systems; communications; computer communications and protocols; signal processing; high-performance architecture; software engineering; VLSI systems; microelectronics; microwave and optoelectronics; antennas and electromagnetic compatibility; power electronics and adjustable speed drives.

#### **Mechanical and Industrial Engineering**

The Department is involved in a wide range of fundamental and applied research projects sponsored by both industry and government in the areas of computational fluid dynamics; industrial control systems and robotics; composites; mechanical systems and manufacturing; microfabrication and micromechatronics; thermo-fluid and propulsion; biomedical and human factor engineering; vehicle systems engineering; and industrial engineering.

Further, the Department houses a master's program that is specifically designed for those students who wish to specialize in aerospace engineering.

#### **Concordia Institute for Information Systems Engineering**

A wide range of research projects, sponsored by both industry and government agencies, are carried out in various areas of research, classified as follows: Systems Engineering, Software Engineering, Middleware, Systems Security, Cryptography and Data Security, Biometrics, Networks, Computer Communication and Protocols, Image Processing, 3D Graphics, Computer Vision, Pattern Recognition, Control, Human Factors and Ergonomics, Human-Machine Interface Design, Design

Science, Requirements Engineering for Product Design, Tele-geo-informatics, Augmented Reality, Bioinformatics, Machine Learning, and Statistics.

#### Computer Science and Software Engineering

A Centre of Excellence in the areas of pattern analysis and machine intelligence (CENPARMI) carries out research in these areas and fosters closer ties with industry. The Inter-University Centre of Algebraic Computation (CICMA) consists of researchers from Concordia, Laval and McGill universities. Its purpose is to develop techniques and software for investigating discrete mathematical problems by computer. CICMA provides computing facilities and a variety of software for symbolic computation to graduate students and faculty.

#### **Mission Objectives**

The mission objectives are to disseminate information about the opportunities for post-graduate education and research in the Faculty of Engineering & Computer Science at Concordia University. This will be done through presentations, question and answer sessions, and discussions. Concordia University already has academic collaborative agreements with several educational institutions in India, such as the Indian Institute of Technology in Madras, the Indian Institute of Technology in Delhi, and the Vellore Institute of Technology in Vellore. In the summer of 2005, the Faculty invited nine undergraduate student interns from several IITs in India. The present mission will consolidate the connections already established with these institutions and will try to establish links with other institutions.





**Concordia University (Faculty of Fine Arts)**

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**Dr. Joanna Berzowska**

**Assistant Professor, Design and Computation Arts**



**Dr. Sha Xin Wei**

**Canada Research Chair in New Media Arts**

**Thematic Focus:** Biotechnology, health research and medical devices / Nanoscience and nanotechnology / The Next Generation of Information Technologies

**Description of Organization**

Concordia University's Faculty of Fine Arts is Canada's foremost facility for research and teaching in Computation Arts. Computation Arts programs facilitate a hybrid environment for the integration of fine arts and computer science. Faculty research specialties include digital typography, interactive arts, digital video, digital sound, smart textiles, wearable computing, and immersive environments, including wireless applications. Teaching emphasizes non-traditional applications of digital technologies while developing awareness of the cultural and political implications of new technologies in networked and information societies.

**Research Interests/Product Development & Business Opportunities**

The Topological Media Lab (TML) was established to study gesture and embodied use of hybrid computational-physical materials at multiple scales. One area in which the TML has created novel technological applications has been software: wearable instruments made from embedded electronics and sensate and active (kinetic or image-bearing) fabrics. In the domain of active textiles and electronic fabrics, the laboratory designs clothing and domestic items with fabrics sensitive to movement, light, magnetic field and touch by transmitting signals from sensors embedded in the garment to wireless computers that can modulate video or sound. With such techniques a set of expressive garments or domestic objects can be designed for use in everyday life.

Extra Soft Labs is a research studio developing underlying technologies for electronic textiles and wearable computing. The lab uses conductive yarns and fibres, many of them imported from India, for power delivery, communication and networking, as well as new materials for display that use electronic inks, shape memory alloys and thermochromic pigments. Traditional textile manufacturing techniques are used: spinning conductive yarns, weaving, knitting, embroidering, sewing, stitching, beading and printing. Textiles have a uniquely intimate relationship with the human body.

Textiles and fashion are a well-established and sizable industry. Electronic textiles constitute an emerging industry with substantial prospects. Textile-based biomonitoring products are expected to reach the market for medical, public safety, military and sporting applications even sooner. These products will be designed to monitor the wearer's physical well-being and vital signs such as heart rate, temperature and caloric consumption.

## **International Partners/Alliances**

Concordia University has many international partners and alliances, in India and 30 other countries. For this mission, three well-established institutions have been identified for development: the Indian Institute of Technology-Delhi (IIT-D), Tata Consultancy Services (TCS) and the National Institute of Fashion Technology (NIFT).

## **Mission Objectives**

One of the strategic interests is to partner the rich cultural and design heritages of the Indian textile industries and the power of small, portable electronics to create a new generation of gesturally animated or image-bearing materials that can in turn be used in the design of everyday but expressive wearable and domestic products.

Concordia has long-standing links with the Indian Institute of Technology-Delhi, and recently a new memorandum of understanding was signed enabling Indian students to complete their internship at Concordia. The Department of Textile Technology at IIT-D is a premier research institution involved in developing both active smart and very smart (intelligent) textile materials for apparel or technical applications in aerospace, defence and sports.

Tata Consultancy Services is also a first-rate institution with an interest in the commercialization of this type of collaborative research. Concordia's ongoing India-focused linkages agenda is well known to Tata Consultancy officials, and further interactions during the Technology Summit will be the appropriate next step.

Finally, the National Institute of Fashion Technology (NIFT) is the top institution of fashion education, technology, design and management. There are NIFT centres in seven cities, including Bangalore and New Delhi.

**CubeWerx Inc.**

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**Mr. Edric Keighan****President and Chief Executive Officer**

**Thematic Focus:** Earth sciences and disaster mitigation technologies

**Description of Organization**

Founded in 1996, CubeWerx has been developing standards-based, off-the-shelf software products in response to spatial data infrastructure requirements. CubeWerx' expertise includes development, marketing and selling of Web services and spatial warehousing software products based on open specifications. These products and other location-based software product components support the most demanding requirements for the integration, access and management of very large volumes of spatial data over the Web.

CubeWerx products such as CubeXPLOR, CubeSERV Cascading Web Map Server, CubeSERV Web Feature Server, CubeSTOR, CubeWerx Web Registry Server and CubeWerx Identity management Server (IMS) were developed using open and interoperable specifications from the OGC (Open Geospatial Consortium). These products allow organizations responsible for implementing geospatial data infrastructures to respond to their most demanding client requirements and offer services based on standard Web services architecture in a multi-vendor products environment.



**GEM Systems Inc.**  
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**Mr. Greg M. Hollyer, M.Sc. (Eng.), P.Eng.  
Marketing Manager**

**Thematic Focus:** Earth sciences and disaster mitigation technologies

### **Description of Organization**

GEM Advanced Magnetometers helps earth science professionals address challenges in mineral exploration, environmental hazards, archaeological and other fields through airborne and ground-based magnetic technologies (Overhauser, Optically Pumped Potassium and Proton Precession). With customers in more than 70 countries around the world and celebrating 25 years of continuous technology R&D, "Our world is magnetic!"

### **Research Interests/Product Development & Business Opportunities**

GEM is currently pursuing R&D on a number of levels, including development of systems for earthquake research and prediction, and ground magnetometer systems for mineral exploration, and environmental and archaeological work.

Major product development directions include design of the Potassium SuperGradiometer for earthquake applications. Work is also continuing on related Potassium products, including the GSMP-40 ground system and the GSMP-30A airborne system. Other product directions include further enhancement of the company's Overhauser and Proton Precession magnetometers for ground applications.

### **International Partners/Alliances**

The company has a network of approximately 20 international partners (agents and representatives) in countries around the world. We actively recruit and encourage new partners to join our network on a continuous basis.

### **Mission Objectives**

GEM's objectives in participating in the mission include evaluation of the Indian market as a potential customer for earthquake research and prediction systems. These systems are already installed in other locations; we are seeking to add as many additional sites as possible in the near future (six months to one year).



**GeoNet Technologies Inc.**  
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**Dr. Mike Pearson, M.Sc.E., P.Eng.**  
**Chief Executive Officer and Director of Marketing**

**Thematic Focus:** Earth sciences and disaster mitigation technologies

### **Description of Organization**

**GeoNet Technologies** is a team of geographic information experts specializing in map and chart production and consulting. We provide specialized expertise in a number of areas, including:

- ▶ coastal mapping
- ▶ production of S57 electronic navigational charts
- ▶ aerotriangulation and photogrammetric mapping
- ▶ civic addressing
- ▶ Web mapping and hosting
- ▶ digital colour orthophoto maps
- ▶ topographic mapping
- ▶ municipal mapping
- ▶ digital terrain model DTM production
- ▶ wetland mapping
- ▶ geographic information quality control

GeoNet will be marketing an integrated solution for risk assessment and mitigation, related to coastal processes such as sea level rise and storminess. The Coastal Decision Support System (DSS) will include modules such as water and weather modeling, significant event (e.g. storm) identification, DEM modeling, geographic database building, flood extent and depth modeling, flood impact assessment, erosion hazard modeling, erosion impact assessment, dynamic storm modeling, and adaptation strategies.



**Hatfield Consultants Ltd.**  
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Web: [www.hatfieldgroup.com](http://www.hatfieldgroup.com)



**Mr. Thomas Boivin**  
**President**

**Thematic Focus:** Earth sciences and disaster mitigation technologies

### **Description of Organization**

Hatfield Consultants Ltd. (Hatfield) was established in 1974, and since that time has undertaken over 1,000 projects for private and public sector clients in North and South America, Southeast Asia, the Indian subcontinent, China, Europe and Africa. Hatfield personnel have experience in a wide range of environmental services, including environmental impact assessments (EIA), GIS and remote sensing, aquaculture and fisheries resource development, contaminant monitoring, environmental communications, training and institutional strengthening. In Canada, Hatfield operates offices in Vancouver, BC, and in the oil sands region of Fort McMurray, Alberta.

### **Research Interests / Product Development & Business Opportunities**

Hatfield specializes in development of Earth observation (EO) solutions for environmental management, fisheries and wetland assessment and disaster management and mitigation. The company has completed successful demonstrations of EO technologies with the Canadian Space Agency, Natural Resources Canada and the European Space Agency in Canada, Vietnam, Cambodia, Lao PDR, Thailand, Indonesia, China, Chile, Namibia, Democratic Republic of Congo and in the Nile River Basin in Africa. Hatfield also provides EO-based solutions for integrated watershed management, coastal zone management, and environmental impact assessment. Hatfield provides services to a number of private industries, natural resource developers (oil and gas, pulp and paper, mining, forestry), governments, non-government organizations(NGOs) and other stakeholders.

### **International Partners/Alliances**

Hatfield has international offices in Bangkok, Thailand (Pro-En Envirosiences), Jakarta and Bogor, Indonesia (PT Hatfindo Prima) and Santiago, Chile (HCL-PUMA). The company has undertaken international projects for over 25 years.

### **Mission Objectives**

Hatfield is interested in exploring project opportunities with Indian companies, government agencies, development organizations, and NGOs, and is seeking to expand its operations in the Indian subcontinent.



**Hegyi Geomatics International Inc.**  
210 Colonnade Road, Suite 200  
Ottawa, Ontario  
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Fax: (613) 274-2804  
Email: [fhgyi@hegyigeomatics.com](mailto:fhgyi@hegyigeomatics.com)  
Web: <http://www.hegyi-geomatics.ca>



**Mr. Frank Hegyi**  
**President and Chief Executive Officer**

**Thematic Focus:** Earth sciences and disaster mitigation technologies

### **Description of Organization**

Hegyi Geotechnologies Inc. (HGI) is an Ottawa-based company specializing in the customization of technology involving geographic information system (GIS) -based digital maps, wireless data transmission (terrestrial- and satellite-based) and automated tracking of mobile units. We integrate these technologies with a focus on Emergency preparedness and disaster management, as well as on natural resource management. We recently acquired MaxSys Engineering, and any previous work and technology development carried out under MaxSys in India is now continued under HGI under the same leadership, Mr. Frank Hegyi.

### **Research Interests / Product Development & Business Opportunities**

HGI is interested in business opportunities in the area of emergency preparedness and disaster management, where our technology including GIS-based digital maps, wireless data transmission (terrestrial and satellite based) and automated tracking of mobile units can be used.

### **International Partners/Alliances**

We have an alliance with Lea Associates South Asia (LASA) of New Delhi, India to work cooperatively on projects where our technology may be deployed in emergency preparedness and disaster management.

### **Mission Objectives**

Our objective is to make contacts with officials of the Department of Science and Technology and Ministry of Home Affairs and any other relevant government department or company for the purpose of exploring where our technology might fit into existing and planned infrastructures in emergency preparedness and disaster management in India.



**Hinz Automation Inc.**  
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S0N 2S5  
Tel: (306)373-5555  
Fax: (306)373-1979  
Email: [scott.huckerby@hinz.com](mailto:scott.huckerby@hinz.com)  
Web: [www.hinztechnologies.com](http://www.hinztechnologies.com)



**Mr. Scott Huckerby**  
**Truegrade Research and Development Manager**

**Thematic Focus:** Other (Crop Quality)

### **Description of Organization**

Hinz Automation Inc. is a high technology company headquartered in Saskatoon since 1971. Our business ranges from the supply of engineering services for electrical and automation systems, through to the supply of the Truegrade crop grading instrument. We have offices across Canada and the United States and have served clients in multiple industries ranging from mining to food processing.

### **Research Interests / Product Development and Business Opportunities**

The Truegrade system in its present form is an outstanding laboratory tool for the lentil and timothy hay industries. To increase the market penetration of the Truegrade system, a newer version needs to be developed. This new version will be a field instrument rather than a laboratory tool to be incorporated into the bulk handling facilities for lentils and similar products. The development of this on-line, real-time grading tool is the primary research interest and subsequent product development that Hinz Automation is interested in pursuing.

### **International Partners/Alliances**

Emsys (a part of Larsen and Toubro)

### **Mission Objectives**

To forge a new technology partnership for the development of the on-line, real-time version of the Truegrade grading instrument.





**i2A Ventures** (Division of IPCS International Inc.)  
7447 – 146 Street, Suite 1  
Surrey, British Columbia  
V3S 8Y8  
Tel: (604) 696-3787  
Fax: (604) 501-0630  
Email: [sudeep@i2aventures.com](mailto:sudeep@i2aventures.com)  
Web: [www.i2aventures.com](http://www.i2aventures.com)

**Mr. Sudeep Chatterjee**  
**President**

**Thematic Focus:** The Next Generation of Information Technologies

### **Description of Organization**

ideas 2 Action Ventures (i2A Ventures) is a multifaceted organization. Our core activities include education sector consulting, market research and development and project consulting. Our interaction enables organizations to better align and manage their projects, resources and budgets to achieve greater return on their investment. We believe in “growth with partnering” and at i2A we are constantly forming alliances to respond to the demands of the marketplace.

### **Research Interests / Product Development & Business Opportunities**

i2A Ventures works actively with Canadian education institutions to develop programs specific to the Indian market. We have worked with Simon Fraser University, BCIT and local school districts. Our research interest is to evaluate India’s animation training industry for sustained growth and better skilled personnel.

i2A is working toward developing an animation diploma program for the Indian animation industry. India is one of the fastest-growing animation markets for outsourcing and domestic consumption.

### **International partners / Alliances**

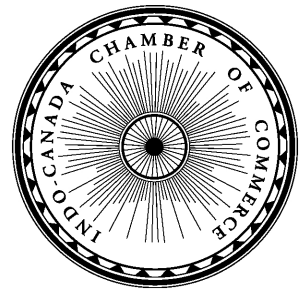
i2A Ventures and the British Columbia Institute of Technology (BCIT) of Canada are looking to identify an Indian partner to undertake research on viability of BCIT’s digital animation and broadcast programs for the India market. This market research will provide input for modification and development of programs for the Indian market, which will be delivered in India through a local partner.

### **Mission Objectives**

To participate in the science and technology summit, to research India’s animation industry requirements and understand existing programs strengths and weaknesses; to understand development and delivery capacity of the animation industry and to visit potential partners to evaluate capability and capacity.



**Indo-Canada Chamber of Commerce**  
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North York, Ontario  
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Fax: (416) 224-0089  
Email: [iccc@iccc.org](mailto:iccc@iccc.org)  
Web: [www.iccc.org](http://www.iccc.org)



**Mr. Ajit Khanna**  
**President**

**Thematic Focus:** Biotechnology, health research and medical devices; Sustainable and alternative energy and environmental technologies; Earth sciences and disaster mitigation technologies; Infotainment

### **Description of Organization**

The Indo-Canada Chamber of Commerce (ICCC) is the premier not-for-profit, voluntary, members-funded Indo-Canadian organization providing a bridge for its members to make a significant contribution to the economic, cultural and social fabric of Canada.

Founded in 1977 and celebrating its 28th anniversary, the ICCC has a current membership of more than 1,000 individuals, professionals and corporations. Its registered office is in Toronto and it has Business Councils in the cities of Ottawa and Montreal.

The objectives of the Indo-Canada Chamber of Commerce include building Canada-India trade and investment, and fostering entrepreneurship and professionalism among members. It achieves this by:

- promoting trade and commerce between Canada, the Indian sub-continent and other countries around the world by creating relationships and links with global business organizations and through trade missions
- providing members with a forum for networking and for sharing ideas, information and experiences in order to promote mutual business success
- creating learning opportunities through seminars, workshops and conferences
- recognizing the contribution and achievements of Indo-Canadians at the Annual Awards & Gala Night

A board of 13 directors, nine of whom are elected at the annual general meeting, governs the organization. The board of directors elects the president. An Executive Committee is elected within the board, consisting of the president and four vice-presidents.

An Advisory Board consisting of 11 senior business people and professional leaders are appointed by board members to assist them and to select high achievers and contributors in eight categories, who are recognized at the prestigious ICCC Annual Awards & Gala Night.



**Industry Canada**

Tel: (613) 954-5258 (J. King) / (613) 957-8072 (S. Mathur)  
Fax: (613) 952-5822 (J. King) / (613) 957-8839 (S. Mathur)  
Email: [king.janet@ic.gc.ca](mailto:king.janet@ic.gc.ca) / [mathur.sandeep@ic.gc.ca](mailto:mathur.sandeep@ic.gc.ca)  
Web: <http://strategis.ic.gc.ca/infotech>

**Dr. Janet King**  
**Director General, Life Sciences Branch**

Address (Life Sciences Branch)  
Industry Canada  
301 Elgin Street  
Ottawa, Ontario  
K1A 0H5



**Mr. Sandeep Mathur**  
**Senior Commerce Officer**

Address (ICT Branch)  
Jean Edmonds Towers North  
300 Slater Street, Suite 1756C  
Ottawa, Ontario  
K1A 0C8

**Thematic Focus:** The Next Generation of Information Technologies

**Description of Organization**

Industry Canada's mission is to foster a growing, competitive, knowledge-based Canadian economy. Its mandate includes three strategic objectives: a fair, efficient and competitive marketplace; an innovative economy; and competitive industry and sustainable communities.

**(Life Sciences Branch)**

The Life Sciences Branch of Industry Canada seeks to advance the economic growth and competitiveness of Canada's life sciences sector.

Our Vision:

To be recognized as the Federal government champion for a dynamic and innovative life sciences sector in Canada, by:

- Using strategic intelligence;
- Building effective partnerships;
- Advocating policies in support of an internationally competitive business climate; and,
- Promoting trade and investment;

In a professional and cooperative learning environment.

**(ICT Branch)**

Industry Canada's mission is to foster a growing, competitive, knowledge-based Canadian economy. Its mandate includes three strategic objectives: a fair, efficient and competitive marketplace; an innovative economy; and competitive industry and sustainable communities.

The ICT Branch within Industry Canada influences policy and decision makers to position Canadian companies for growth and innovation in the global marketplace. The current focus of the Branch with respect to international business development is on emerging markets, namely India, China and Brazil. Our objective for this mission is to assist Canadian ICT (information and communications technology) companies to market their products and form partnerships with Indian organizations.



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Email: [ha@info-electronics.com](mailto:ha@info-electronics.com)  
Web site: [www.info-electronics.com](http://www.info-electronics.com)



**Dr. Harinder P. S. Ahluwalia, Eng.**  
**President**

**Thematic Focus:** Earth sciences and disaster mitigation technologies

### **Description of Organization**

Info-Electronics Systems (IES) Inc. provides computer-based technology products and services, including turnkey systems in weather forecasting and disaster management. IES also provides engineering and consulting services for implementation of Customer Relationship Management (CRM) systems.

IES' Quality Management System (QMS) is ISO 9001:2000 certified by the Quality Management Institute of Canada. IES provides systems and services in the field of hydro-meteorology in more than 12 countries around the world. IES has implemented several high-profile projects in India, such as a flood forecasting system for the Central Water Commission, a meteorological satellite data processing system for the India Meteorology Department, and data collection systems for avalanche forecasting for the Snow and Avalanche Study Establishment.

The company has offices in Montréal and New Delhi and provides a presence in India for many North American companies.

### **Research Interests / Product Development & Business Opportunities**

IES has developed its own aviation briefing workstation, weather forecasting workstation and testing and problem reporting and tracking system. IES is currently working in India in the field of an agricultural geocapacity planning project and disaster management projects. We are interested in a number of opportunities with India Meteorology Department, Central Water Commission, Snow and Avalanche Study Establishment, ISRO/Science Applications Centre and National Informatics Centre.

### **International Partners/Alliances**

IES works in partnership with a number of North American and European companies, including:

- ▶ Global Imaging for Remote Sensing Satellite Ground Processing System,
- ▶ Radiometrics Corporation for atmospheric profiling
- ▶ Degreane-Horizon for wind profilers and AWOS
- ▶ Weather Decision Technologies Inc. for various types of weather decision support systems
- ▶ TOA for lightning detection and positioning systems
- ▶ Campbell Scientific Canada for data loggers
- ▶ Sontek for hydrological instrumentation

### **Mission Objectives**

During this mission, IES expects to raise its profile in India and meet potential government clients dealing with space sciences, hydrology, disaster management and agricultural geocapacity building.

**International Trade Canada (Regional Office-Quebec)**

5 Place Ville-Marie

Montreal, Quebec

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Fax:(514) 283-8794

Email: [roy.lucie@ic.gc.ca](mailto:roy.lucie@ic.gc.ca)Web: [www.infoexport.gc.ca](http://www.infoexport.gc.ca)International Trade  
CanadaCommerce international  
Canada**Ms. Lucie Roy****Trade Commissioner, Asia-Pacific****Thematic Focus:** Other (Trade promotion)**Description of Organization**

In partnership with the Regional Trade Networks, the ITCan regional offices can help direct you to the existing products and services that relate to your particular exporting needs. Their mandate is to work within the Team Canada Inc (TCI) partnership to substantially increase the number of Canadian exporters, to expand and diversify exports and to support the investment initiatives of Canadian small- and medium-sized enterprises (SMEs). An unprecedented effort to streamline export services to the Canadian business community, TCI is a network of government and private sector export service providers that helps Canadian business succeed in world markets. Clients achieve maximum benefit by receiving the right kinds of services, quickly and efficiently.



**International Trade Canada (Science and Technology Division)**

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Web: [www.infoexport.gc.ca/science](http://www.infoexport.gc.ca/science)



International Trade  
Canada

Commerce international  
Canada

**Ms. Sara Hradecky**  
**Director General, International Business Development Policy and Planning**



**Mrs. Daniele Ayotte**  
**Director,**  
**Science and Technology Division**



**Mr. Dave Church**  
**Deputy Director,**  
**Science & Technology Division**  
**(Policy)**



**Ms. Roohi Ahmed**  
**Trade Commissioner, Science &**  
**Technology Division**  
**(India)**

**Thematic Focus:** All

**Description of Organization**

International Trade Canada (ITCan) works to position Canada as a business leader for the 21st century. ITCan helps large and small Canadian companies to expand and succeed internationally, promotes Canada as a dynamic place to do business and invest, and negotiates and administers trade agreements.

As part of ITCan, the Trade Commissioner Service is a network of more than 900 trade professionals working in Canadian embassies, high commissions and consulates located in 150 cities around the world and 12 regional offices in Canada. The Trade Commissioner Service has a primary role of providing in-market assistance to Canadian companies in the development of their international business. The Trade Commissioner Service also helps foreign buyers find Canadian products and services.

Canada's trade team in India is located in a number of offices - the Canadian High Commission in New Delhi, the Consulates General in Mumbai and Chandigarh, the Canadian Trade Office in Bangalore, the Canadian Consulate in Chennai, and the Honorary Consulate of Canada in Kolkata. Together, we strive to serve Canadian business interests in every part of India.

**ITCan's Science and Technology (S&T) Program** is an integrative force in the new international commerce model which supports international trade and investment. Our program plays a strategic leadership role in enhancing Canada's S&T capacity, competitiveness and prosperity through effective international linkages for Canadian firms, universities and research institutions.

**Objectives**

- o To foster international Research and Development (R&D) collaboration;
- o To identify and incorporate world leading research into the development of innovative processes, goods and services in Canada; and
- o To position Canada as a valued international S&T partner.

## Expected Outcomes

- o Access to the world's best facilities, equipment, talent, knowledge and cost-sharing mechanisms to enhance the quality and speed of Canadian research activities and the potential for timely commercialization;
- o Acquisition and dissemination of technologies and technological information required to ensure Canada's competitive standing; and
- o Acquisition of international S&T intelligence to guide government and corporate policy decisions and priority-setting.

## Roles and Responsibilities

- o Maximize key bilateral S&T relationships
  - Develop coordinated action plans for priority S&T countries with the Canadian S&T community
    - Actively seek bilateral complementarities in S&T
- o Facilitate the development of effective networks by seeking entrepreneurial, international S&T players
  - Bring Small and Medium enterprises, Science-Based Departments and Agencies, universities and research institutions with counterparts abroad through specific partnering activities in Canada's strength areas of international S&T
    - o Promote inward investment in S&T by S&T intensive firms
    - o Coordination of Canada's participation in key S&T world conferences and develop Canada's exclusive S&T events and activities
    - o Build S&T capacity by deploying skilled S&T personnel in priority S&T countries and developing and produce S&T program marketing tools
- o Provide intelligence on international S&T issues for:
  - S&T policy formation in Canada
    - Identification of international collaborative R&D opportunities
  - o Facilitate access to foreign sources of venture capital
  - o Manage the Going Global Fund and the new International S&T Partnerships Program established to promote collaborative R&D between Canadian and foreign scientists and technologists.





**Klohn Crippen Consultants**

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**Dr. Robert C. Lo**  
**Staff Consultant**

**Thematic Focus:** Earth Sciences and disaster mitigation technologies

**Description of Organization**

Klohn Crippen Consultants Ltd. is an international engineering and environmental services consulting firm. Value-added solutions have earned us a reputation for excellence in the fields of geoscience and geotechnology, civil engineering, mining, environment, oil and gas, hydropower, transportation and water resources. Our 250 employees include specialists with broad language, cultural and geographical experience, who have helped us to complete projects in more than 50 countries. Our project management system is ISO 9001-registered. In 1999, Klohn Crippen formed a strategic partnership with the Louis Berger Group, Inc., one of the world's leading infrastructure engineering, environmental science and economic development companies. As such, we have access to the Berger Group's 3,500 employees worldwide.

Klohn Crippen has completed many successful projects in southeast Asia, and is currently engaging in several high-profile projects in the area.

**Research Interests / Product Development & Business Opportunities**

Our core business is to provide consulting engineering and environmental services in the following sectors: geoscience and geotechnology; civil engineering; mining; environment; hydropower; oil and gas; transportation; and water resources.

Our clients include both government agencies and private companies, for example government agencies involved in infrastructures (natural hazards including earthquake, flood, tsunami and landslide; transportation, dams and power facilities); and private companies in mining, power, industrial, geotechnical and water resources sectors.

**International Partners/Alliances**

Our affiliated company, Louis Berger Group, Inc., has offices in India and Thailand, including the following:

*India*

Mr. James McClung, Vice President, Central and South Asia

Vatkia Triangle 5th Floor

Sushant Lok, Phase- 1

Guragaon- 122022

New Dehli, India

Tel.: (124) 504 4755

Fax: (124) 504 4750

E-mail: [lbgindia@vsnl.net](mailto:lbgindia@vsnl.net)

Web: [www.louisbergerasia.com](http://www.louisbergerasia.com)



*Thailand*

Mr. Derek M. Sherman, Vice President, Transportation Economics  
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38 Convent Road, Silom Road  
Bangkok 10500, Thailand  
Tel.: 235 3551  
Fax: 236 1353; 237 7818  
E-mail: [lbgtai@louisberger.com](mailto:lbgtai@louisberger.com)

**Mission Objectives**

We are interested in participating in reconstruction projects in India and Thailand that would require international consulting services for assessing and mitigating natural hazards associated with these projects. We are also interested in business opportunities to provide general consulting services in our core business.



**LabTest Certification Inc.**  
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Web: [www.labtestcert.com](http://www.labtestcert.com)

**Mr. Kavinder Dhillon**  
**President and Chief Executive Officer**

**Thematic Focus:** Biotechnology, health research and medical devices

**Description of Organization**

LabTest provides a quick, cost effective and streamlined route for product approvals. LabTest can handle all your product testing needs for product certifications. For organizations with global markets and multiple product categories, LabTest offers you a “one stop global certification solution” for domestic and international markets.

With our partnership agreement with TUV, LabTest opens the doors for manufacturers and distributors to comply with the national jurisdiction for the U.S.A., Canada, the European Union and many other international markets. With the access to cTUVus Mark, TUV GS Mark, CE Marking, CB Scheme approvals and certifications, we provide you with the access to the world recognized approval marks.

For manufacturers requesting approvals for the marine industry, our partnership agreement with DNV provides you an easy access to the “wheel mark” and the DNV-type approvals.

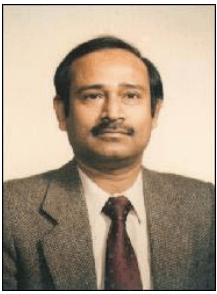
**Business Opportunities**

To provide testing and approval services to manufacturers located in India wishing to export their products to Canada, the U.S.A. and/or the European Union; to provide local, cost effective testing and certification approvals as your “partner in certification.”

**International Partners/Alliances**

LabTest Certification Inc. is looking to partner with a local testing laboratory or an engineering company to provide testing services in India on our behalf. The local representative(s) will be operating under direct contact with the head office in Richmond, B.C., Canada.

We can help you to get your devices certified for the U.S.A., Canada, the European Union (CE Marking) and the countries participating in the CB Scheme and IECEx Scheme, in a timely and cost effective way.



**McGill University (Department of Mechanical Engineering)**  
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**Dr. Arun K. Misra**  
**Thomas Workman Professor and Chair**

**Thematic Focus:** All

### **Description of the Organization**

McGill University is one of the most exciting and distinguished universities in North America. International in outlook, with nearly two hundred years of excellence in teaching and research, today McGill has 21 faculties and professional schools offering programs of study in some 300 areas. Graduate studies include 250 master's, doctoral, diploma and certificate programs in more than 85 fields of study.

### **Research Interests**

McGill is strongly committed to graduate studies and research. More than 25 percent of the student body is composed of graduate students. As one of the leading research institutions of North America, McGill University is home to more than 70 research institutes and national Centres of Excellence, 6 research and teaching hospitals, and 5 major museums. McGill was ranked first in research intensity in Canada in the medical/doctoral category by the Canadian Education Directory (2003, Infosource Group). Research is conducted virtually in all scientific and technical areas, but the priority areas are medical research — in particular genomics, proteomics and biotechnology — biomedical engineering, nanoscience and nanotechnology, environmental sciences and engineering, information technology, aerospace, and robotics and automation.

### **International Partners/Alliances**

McGill University has international students from approximately 150 countries. McGill investigators are involved in collaborative research with over 60 institutions outside Canada, on every continent. McGill has international exchange agreements with institutions located in more than 30 countries.

### **Mission Objectives**

Excellence in teaching and research.



## National Research Council of Canada

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National Research  
Council Canada

Conseil national  
de recherches Canada

### **Dr. Janusz Luszyk**

**Senior Advisor, Nanotechnology**



### **Mr. Eric Champion**

**Senior Advisor**

**Thematic Focus:** Biotechnology, health research and medical devices / Nanoscience and nanotechnology / Sustainable and alternative energy and environmental technologies

### **Description of Organization**

The National Research Council of Canada (NRC) is the Government of Canada's premier organization for research and development. NRC is composed of over 20 institutes and national programs, spanning a wide variety of disciplines and offering a broad range of services. NRC is located in every province in Canada and plays a major role in stimulating community-based innovation.

### **Research Interests**

NRC institutes and programs are divided into three key areas: Physical Sciences and Engineering, Life Sciences and Information Technology, and Technology and Industry Support. NRC conducts world-class R&D in areas such as neurobiology and immunochemistry, agricultural and pharmaceutical biotechnologies, medical diagnostics and devices, marine biosciences, nanotechnology and molecular sciences, environmental technologies and fuel cells, information and communications technologies, manufacturing technologies, advanced materials, aerospace, construction and ocean technologies, metrology and astronomy.

### **International Partners/Alliances**

International R&D collaborations benefit all of the partners through the generation of new knowledge, new technologies and new business opportunities, which lead to improved quality of life in the participating countries. NRC participates in federal Canadian science and technology (S&T) agreements with the European Union, France, Germany and Japan. On an agency level, NRC has strategically important international R&D relationships with organizations in such countries as the Czech Republic, France, Germany, Japan, Korea, Spain, Singapore, Taiwan and the United States. On a researcher-to-researcher level, NRC is active in more than 40 countries worldwide.

### **Mission Objectives**

The prime NRC focus is on promoting the growing importance of government, industry and academic S&T cooperation between the two countries. NRC's participation in the Summit will also provide the opportunity to explore research collaborations with potential Indian partners. In addition, NRC's Industrial Research Assistance Program (IRAP) will lead a mission of small and medium-sized Canadian biotech companies to a workshop with the Confederation of Indian Industry's Indian companies at the same time as the Summit.



## **National Research Council (Aerospace)**

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National Research  
Council Canada

Conseil national  
de recherches Canada

### **Dr. Prakash C. Patnaik Chief and Principal Research Scientist**

**Thematic Focus:** Nanoscience and nanotechnology / Sustainable and alternative energy and environmental technologies

### **Description of Organization**

The National Research Council of Canada Institute for Aerospace Research (NRC Aerospace), Canada's national aerospace laboratory, conducts research and development in the full range of issues related to the design, manufacture, performance, use, and safety of air and space vehicles. Located in Ottawa and Montreal, Canada, NRC Aerospace is a leader in aerospace innovation through focused R&D programs, partnerships and collaborations with industry, government, and university partners and clients from around the world. It has over 300 professional, technical and support staff in five laboratories.

### **Research Interests**

NRC institutes and programs are divided into three key areas: Physical Sciences and Engineering; Life Sciences and Information Technology; and Technology and Industry Support. NRC conducts world-class R&D in areas such as marine biosciences and seafood safety, medical diagnostics and devices, nanotechnology, agricultural and pharmaceutical biotechnologies, construction codes and materials standards for buildings and infrastructure, aerospace and metrology.

### **International Partners/Alliances**

International R&D collaborations benefit all of the partners through the generation of new knowledge, new technologies and new business opportunities, which lead to improved quality of life in the participating countries. NRC participates in Canadian S&T agreements with the European Union, France, Germany and Japan. On an agency level, NRC has strategically important formal international R&D relationships with organizations in the Czech Republic, France, Germany, Japan, Singapore, Spain and Taiwan. On a researcher-to-researcher level, NRC is active in more than 40 countries worldwide.

### **Mission Objectives**

The prime NRC focus is on promoting the growing importance of government-industry-academic S&T cooperation between the two countries. In addition, NRC's Industrial Research Assistance Program (IRAP) will lead a mission of Canadian small and medium-sized biotech enterprises to a workshop with the Confederation of Indian Industry's Indian companies at the same time as the summit.



**National Research Council (Industrial Research Assistance Program)**

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National Research  
Council Canada

Conseil national  
de recherches Canada

**Dr. Bill Dobson**  
**Director, NRC-IRAP Ontario**



**Dr. Eric Swanson**

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**Thematic Focus:** All

**Description of Organization**

NRC's Industrial Research Assistance Program (IRAP) is the Government of Canada's premier innovation and technology assistance instrument for small and medium-sized enterprises (SMEs). For almost 60 years, IRAP and its predecessors have been helping Canadian firms improve their performance through technological innovation.

IRAP's mandate – to stimulate wealth creation for Canada through technological innovation – is largely accomplished by providing technology assistance to SMEs at all stages of the innovation process, to build their innovation capacity. Innovation – translating knowledge into new products, processes and services that improve the firm's competitiveness – is at the base of a strong economy.

IRAP helps SMEs understand the technology issues and opportunities and provides linkages to the best expertise in Canada. IRAP provides innovation assistance to 12,000 firms each year, sharing the financial risks with some 3,300 of these for R&D projects and pre-commercialization activities.

With a national network of more than 100 partners and a field delivery staff of over 260 Industrial Technology Advisors, IRAP's programs and value-added services stimulate R&D and innovation in businesses and communities across Canada, including rural and remote areas.

**Research Interests**

Explore opportunities for Canadian SMEs in all sectors.

**Mission Objectives**

Global market intelligence and opportunities for Canadian SMEs.



**National Research Council (Institute for Biological Sciences)**

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National Research  
Council Canada

Conseil national  
de recherches Canada

**Mr. Scott Ferguson  
Business Development Officer**

**Thematic Focus:** Biotechnology, health research and medical devices

**Description of Organization**

The National Research Council (NRC) is the Government of Canada's premier organization for research and development. NRC is composed of over 20 institutes and national programs, spanning a wide variety of disciplines and offering a broad array of services. We are located in every province in Canada and play a major role in stimulating community-based innovation. NRC institutes and programs are organized into three key areas: Physical Sciences and Engineering; Life Sciences and Information Technology; and Technology and Industry Support.

The NRC Institute for Biological Sciences (NRC-IBS) is focused on research and development associated with neurodegenerative diseases, infectious diseases, cancer vaccines, immunotherapeutics and bioproducts, and on moving these discoveries out to the marketplace. Research programs are carried out with partners in industry, universities, hospitals and other R&D organizations.



**National Research Council (Institute for Fuel Cell Innovation)**

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National Research  
Council Canada

Conseil national  
de recherches Canada

**Mr. Dave Ghosh**  
**Director, Science and Technology**

**Thematic Focus:** Sustainable and alternative energy and environmental technologies

**Description of Organization**

The National Research Council of Canada's Institute for Fuel Cell Innovation (NRC-IFCI) is Canada's premier applied research organization dedicated to supporting Canada's fuel cell and hydrogen industry.

NRC-IFCI works independently and in partnership with universities, government agencies and companies on projects focused on the research, development, demonstration and testing of hydrogen and fuel cell systems.

This mandate delivers on Government of Canada climate change and innovation priorities and responds to Canada's Fuel Cell Commercialization Roadmap, which identified critical areas of research necessary for Canadian industry to overcome cost, performance and reliability challenges of hydrogen and fuel cell technologies.

NRC-IFCI activities are also in line with the province of British Columbia's Hydrogen and Fuel Cell Strategy. NRC-IFCI's physical location on the UBC campus emphasizes federal support for B.C.'s hydrogen fuel cell cluster, the largest concentration of expertise of its kind in the world.

NRC-IFCI is home to industry association Fuel Cells Canada, and plays a central role in some of Canada's most important technology demonstration programs, including the Hydrogen Highway and the Vancouver Fuel Cell Vehicle Program.





**National Research Council (Plant Biotechnology Institute)**

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National Research  
Council Canada

Conseil national  
de recherches Canada

**Dr. Kutty Kartha  
Director General**



**Dr. Gopalan Selvaraj  
Principal Research Officer**

**Thematic Focus:** Biotechnology, health research and medical devices

**Description of Organization**

The National Research Council of Canada (NRC) is the Government of Canada's premier organization for research and development. NRC is composed of over 20 institutes and national programs, spanning a wide variety of disciplines and offering a broad range of services. NRC is located in every province in Canada and plays a major role in stimulating community-based innovation.

**Research Interests**

NRC institutes and programs are divided into three key areas: Physical Sciences and Engineering, Life Sciences and Information Technology, and Technology and Industry Support. NRC conducts world-class R&D in areas such as marine biosciences and seafood safety, medical diagnostics and devices, nanotechnology, agricultural and pharmaceutical biotechnologies, construction codes and materials standards for buildings and infrastructure, aerospace and metrology.

**International Partners/Alliances**

International R&D collaborations benefit all of the partners through the generation of new knowledge, new technologies and new business opportunities, which lead to improved quality of life in the participating countries. NRC participates in federal Canadian science and technology (S&T) agreements with the European Union, France, Germany and Japan. On an agency level, NRC has strategically important international R&D relationships with organizations in such countries as the Czech Republic, France, Germany, Japan, Korea, Spain, Singapore, Taiwan and the United States. On a researcher-to-researcher level, NRC is active in more than 40 countries worldwide.

**Mission Objectives**

The prime NRC focus is on promoting the growing importance of government, industry and academic S&T cooperation between the two countries. In addition, NRC's Industrial Research Assistance Program (IRAP) will lead a mission of small and medium-sized Canadian biotech companies to a workshop with the Confederation of Indian Industry's Indian companies at the same time as the Summit.



**Natural Resources Canada (Earth Sciences Sector)**

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**Thematic Focus:** Earth sciences and disaster mitigation technologies

**Description of Organization**

The Earth Sciences Sector of Natural Resources Canada (NRCan) is Canada's leading agency for geology and geomatics. Its two principal components are Geomatics Canada (GC), the country's national surveying, mapping and remote sensing organization; and the Geological Survey of Canada (GSC), which is the country's oldest scientific agency, created in 1842 with a mandate to explore and document mineral and other geological resources.

Both GC and the GSC work closely with Canadian industry to deliver the most advanced services possible and to support companies working on projects worldwide.



**Natural Sciences and Engineering Research Council of Canada (NSERC)**

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**Ms. Isabelle Blain**  
**Vice-President, Research Grants and Scholarships**

**Thematic Focus: Other (Research Funding Agency)**

**Description of Organization**

The Natural Sciences and Engineering Research Council of Canada (NSERC) is the primary federal agency investing in post-secondary research and training in the natural sciences and engineering (NSE), and is an integral part of the Government of Canada's strategy to further develop a competitive economy.

NSERC supports the development of highly qualified people through a variety of scholarship and fellowship programs and through the promotion of science, mathematics and engineering to young Canadians. This suite of programs aims to stimulate young Canadians' interest in pursuing studies in the NSE and to encourage the continued training of Canada's most promising new scientists and engineers.

NSERC funds the process of discovery and the creation of new knowledge through programs that support university researchers' research in all areas of the NSE.

NSERC also helps Canada innovate through an array of programs that establish and support partnerships between universities, colleges, industry and government agencies in order to maximize the social and economic return of NSERC's investments in research and training.



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**Mr. Krishan Gupta**  
**Project Coordinator for India**

**Thematic Focus:** The Next Generation of Information Technologies

**Description of Organization**

Network Planning Systems Inc. (NPS) is a private Canadian company whose aim is to help make networks more efficient and less expensive. Its sister company, Remote Wireless Access Systems Inc. (RWAS), manufactures and sells wireless hardware products developed by NPS, and resells third-party products that add value to its own products.

**Research Interests/Product Development & Business Opportunities**

NPS and RWAS are currently focusing their research on low-cost, high-speed wireless systems designed specifically for rural and remote areas. Some of the potential applications of these soon-to-be-available products include:

- Rural regional networks to interconnect larger villages and rural towns of between 500 and 10,000 people to each other and to the Internet: This application is provided by our RuralScape™ family of Wi-Fi products. This is what is called a "fixed" wireless network. Each building (home, office, etc.) in the region that wishes to access the network needs to purchase a small antenna and a Wi-Fi Access Point that RWAS can provide for a low price.
- Networks to extend even further out to the most remote schools, community centres and smaller villages: This application is provided by our RemoteScape™ family of Wi-Fi products. These products inexpensively extend a RuralScape™ network further out to the smallest village. We use special radio techniques to cut the cost of the RemoteScape™ wireless links to roughly half the cost of RuralScape™ links, at the expense of halved bandwidth. To keep costs down even further, the high-speed connection is typically delivered to just one place in the rural community, such as a one-room school or a community centre.
- Networks to provide outdoor wireless connectivity to an entire farm: Once a farm is connected to the Internet by a RuralScape™ and/or RemoteScape™ network (or by any other means), that connection can be extended to the entire farm operations area using our FarmScape™ family of wireless products. Two wireless technologies are used: Wi-Fi for the wireless "backhaul" that provides the basic interconnectivity on the farm, and ZigBee for further connection to wireless sensors of various kinds (e.g. soil compaction, air temperature, soil dampness). The farmer will be able to access voice, video or data anywhere in the field or from the main farm centre, and use these to manage the farm operations much more efficiently.

NPS and RWAS are interested in finding Indian organizations or companies that can partner with us to:

- help test our products for standards certification in India
- help field-test the products in these application areas to check out their suitability for Indian conditions
- help add value to the products (e.g. using software applications or devices that run on top of the network); a prime example would be a company developing e-learning or video learning material to Indian educational standards
- help market the products in India

**International Partners/Alliances**

- Computers for Schools Program (Industry Canada) – International Program
- Blyth Education (Toronto, Canada) – Community and Environmental Service Program
- Sencia Canada Ltd. (Thunder Bay, Canada) – Informetica Learning Management System

## **Mission Objectives**

The aim of the mission is to introduce to India several new families of wireless communications products that are designed to bring inexpensive high-speed connectivity to rural and remote areas, down to the smallest village, and even to cover individual farms. These products are designed by Network Planning Systems Inc. and will be manufactured and sold by its sister company, Remote Wireless Access Systems Inc.

In particular, we would like to show how the RuralScape™ and RemoteScape™ families of wireless products could be used to deliver e-learning and video learning materials to small one-classroom learning centres in smaller villages spread throughout an Indian state. In our proposed solution, each remote classroom would be connected via RemoteScape™ wireless links through one or more RuralScape™ backhaul links to a district MultiMedia Course Development Centre (MCDC). The district MCDCs would be interconnected via existing longer-haul networks, preferably broadband, or by satellite ground stations.



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**Mr. Tom Hirose**  
**President**

**Thematic Focus:** Earth sciences and disaster mitigation technologies

**Description of Organization**

Noetix Research Inc. was incorporated in 1988 in Ontario and its headquarters is in Ottawa, Ontario, with operations in Waterloo, Ontario. The firm specializes in remote sensing and geographic information systems for land and marine applications using a full complement of experts in project management, applications and systems engineering.

The Land and Marine Application groups provide a range of services to our domestic and international clients, including value-added products, training and specialized software. Areas of specialization are agriculture crop condition monitoring and yield forecasting; environmental monitoring; water resource and snow mapping; and the use of geomatics for health. Clients can access these services through purchasing information products, training and technology transfer and software products.

The GeoInformation group supports the development of systems and software for the application groups and clients. They have expertise in software engineering, off-the-shelf geographic information systems (GIS) and image analysis development environments, and geomatic algorithm design. Engineering services include operational scale production systems analysis, design and integration; advanced information extraction algorithm development; and GIS support services. GeoInformation works closely with the Land and Marine groups to provide technology solutions for our clients as well as interfacing directly with Information Technology customers on their engineering problems.

Noetix services include:

- ▶ project management and requirements/systems analysis
- ▶ information management systems for geomatic applications
- ▶ advanced image processing software for information extraction
- ▶ capacity building through training in theory and practical workshops combined with technology transfer in remote sensing and GIS
- ▶ workshops conducted in over 15 countries
- ▶ operational implementation of technology and training to meet client needs
- ▶ operational services:
  - ▶ Health Mapserver (Sri Lanka)
  - ▶ water quality monitoring (Lake Winnipeg, Manitoba)
  - ▶ agricultural crop monitoring and modelling (North America)
  - ▶ floe edge-monitoring service to northern communities (Arctic)
  - ▶ R&D support services and projects

**Research Interests / Product Development & Business Opportunities**

Noetix is interested in pursuing opportunities in the following areas:

- ▶ the application of earth observation to health applications. Specifically, vector control strategies and implementation, ecohealth, and health tracking.
- ▶ agrometeorological modelling integrated with remote sensing for drought, irrigation, and excessive moisture

## **International Partners/Alliances**

Some international organizations that Noetix Research has worked with include:

- ▶ European Space Agency
- ▶ World Health Organization
- ▶ Kenya Medical Research Institute
- ▶ UNDP
- ▶ NOAA and US Navy
- ▶ Chinese Academy of Sciences
- ▶ Comisión Nacional de Actividades Espaciales, Argentina

## **Mission Objectives**

The objective of this mission is to establish organizations and companies that have want to pursue project opportunities that have mutual benefit to participating parties.



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**Dr. Bakshish G. Chauhan**  
**President**

**Thematic Focus:** Sustainable and alternative energy and environmental technologies

**Description of Organization**

NorEEco is a Canadian firm that provides comprehensive consulting, research, training and advisory services for the demonstration and commercialization of sustainable development technologies. Our vision is to promote sustainable solutions for the 21st century and to help communities move toward zero emissions. Our focus is to help companies develop and implement strategies for minimizing greenhouse gas emissions to mitigate climate change. We are committed to working with our clients to meet or exceed their goals of sustainable development to enhance their image as good corporate citizens, both locally and globally.

The firm has a network of highly qualified associates who analyze emerging innovative technologies and develop strategic partnerships for their diffusion and transfer in the global marketplace. We work diligently with technology developers and end-users to demonstrate the effectiveness and efficiency of such systems. We perform comprehensive feasibility studies and market analysis. We also help communities seek government funding for further development and demonstration of emerging technologies for early market adoption.

**Research Interests/Product Development & Business Opportunities**

NorEEco is interested in pursuing research and business development in the following areas:

- applied research and promotion of hydrogen and fuel cell technologies
- development and demonstration of distributed power generation systems based on wind turbines, small hydro, photovoltaics and microturbines
- power electronic converters for motor drives and distributed generators
- feasibility studies and community energy planning for the integration of renewable energy conversion systems with emerging technologies
- energy modelling and analysis
- environmental biotechnology: biosensors, biofiltration and bioremediation
- assessment and commercialization of innovative bench-scale technologies

**International Partners/Alliances**

The firm facilitates strategic global partnerships among universities, research institutes, industries and government agencies to enhance research collaborations. Working on research and development in renewable energy systems and distributed generation, our current international partners include Curtin University of Technology in Australia, East China Jiaotong University, Beijing Jiaotong University, Xian Jiaotong University and Hefei University of Technology in China.

**Mission Objectives**

To explore avenues for joint ventures to further develop, test and deploy sustainable energy and environmental technologies.



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**Dr. Dody Bautista**  
**Vice President, Research and Development**

**Thematic Focus:** Biotechnology, health research and medical devices

### **Description of Organization**

Norgen Biotek Corp. is a rapidly growing, privately owned biotechnology company dedicated to the development of novel, high performance and affordable nucleic acid and protein purification technologies. Established in 1998 to become the first biotechnology company in the Niagara Peninsula (in southern Ontario), it has since developed technologies and products for the purification of proteins, DNA and RNA. Norgen Biotek now holds several patents for the technology from the U.S.A. and other countries, with several others pending. The company established numerous collaborative agreements and on-going business relations with researchers in companies and in academic institutions worldwide.

### **Research Interest, Product Development & Business Opportunities**

Norgen Biotek is currently manufacturing its own ProteoSpin product line and nucleic acid purification kits in a variety of scales and formats. These products address sample preparation for a wide variety of downstream applications in proteomics and genomics. These disciplines are fueling the discovery of more selective drug targets and biomarkers for novel diagnostics and therapeutics. The need to improve the speed and efficiency of drug discovery is the primary driver of proteomics. This research is driving demand for novel, affordable, validated, automated protocols for sample preparation, separation, characterization and data management for both bench scientists and industrial scale.

### **Mission Objectives**

Norgen Biotek is seeking partners to expand the marketing and commercialization of its growing list of products, to enhance manufacturing capabilities, to introduce our technology into the large-scale industrial purification markets and to extend our technology into the diagnostic and forensic markets.



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**Mr. Madanmohan Chawla**  
**Advisor**

**Thematic Focus:** Sustainable and alternative energy and environmental technologies

**Description of Organization**

Nuworld Research and Development promotes MMC Ontario and their associated technology partners on trade missions to "add capacity" while verifying local infrastructure for MMC Ontario. We research, nurture, train, pre-qualify and recommend investment-focussed opportunities to MMC Ontario. MMC Ontario invests in emerging technology companies, manufacturers and system integrators that wish to be a technology partner in "proof of concept" sites in Ontario, while being nurtured as an India-focussed anchor company.

**Research Interests/Product Development & Business Opportunities**

Triple Convergence: Renewable energy helps end-users qualify to earn carbon credits while improving energy efficiency, saving both money and the environment.

Concept: Energy efficiency improvements result in reduced load on the default electricity supplier (local electricity distribution company), resulting in less immediate need for power generation by the default energy generator (electricity generation companies). Earned carbon credits can be sold to Canadian or international carbon trading companies, thus financing renewable energy.

Renewable Energy: Hybrid energy solutions utilize renewable energy such as wind and solar for peak-shaving, thus saving money for the end-user while sustaining global competitiveness in light of increasing oil and local electricity prices. A hybrid energy system is ideally suited for peak-shaving by the end-user (industry, real estate or building owners) as part of demand-side management, and can be designed to complement power generation from mini or micro hydro, agricultural and other waste power-generation projects. Government programs and incentives for renewable energy bring added benefits to the end-user.

Demand-Side Management, Urban Solutions: A hybrid energy system is designed to be connected "in line" with the load; in other words, all of the energy that used to be supplied from the grid (or other source) can now be supplied by our very high reliability electronic power delivery system, supplemented by renewable energy such as wind or solar and your existing energy source. Currently our preference is less than 100 KW, which is ideal for small to medium-sized industrial and building owners. Hybrid energy solutions require a feasibility study to custom design the integrated energy solution for the existing load of the industry or building owners. For example, a wind machine can be placed in the parking lot while solar panels are fitted on the roof or south side of the existing building.

Non-Grid-Connected Communities, Rural Solutions: Agricultural waste may be converted to gas through a gasifier to produce electricity, supported with renewable energy such as wind or solar. This concept is ideally suited to communities that are not connected to the power grid. These solutions can also be custom designed based on the load requirements of each community that wishes to save on electricity while earning carbon credits.

Fuel Conversion and Qualifying for Carbon Credits: A stationary diesel engine may be converted to gas, while peak-shaving (or adding capacity) using hybrid energy solutions, thus reducing dependency on diesel. The stationary diesel engine or existing energy supplier becomes a backup or default supplier during the peak demand. This method may also qualify small

and medium-sized businesses to earn carbon credits under a fuel conversion program while sustaining global competitiveness in light of increasing oil and local electricity prices.

### **International Partners/Alliances**

As part of our business model, our local partner first needs to transform the "step-by-step guide" and install a "local proof of concept." Our intention is that the local "proof of concept" site should always stay in control of our local partner. Once the "step-by-step guide" is transformed to meet local requirements, it will be the responsibility of the local partner to showcase the "proof of concept" site to the chosen industry or government customers, resulting in continuous local business, while all the necessary support, project management, training and continuous R&D are provided to the local partner from Canada.

Ideally we are looking for partners who have a strong financial balance sheet and are an original equipment manufacturer or an engineering or contracting company that specializes in electrical, mechanical and millwork.

### **Mission Objectives**

We are looking for suitable local partners with a strong financial balance sheet to first transform the "step-by-step guide" and install a local "proof of concept." This will result in identification of local requirements, government programs and incentives, difficulties, and the changes required to adjust to local conditions, to adjust training programs in Canada, and to develop a local business plan including the return on investment.



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**Mrs. Nithya Prabha Chandrasekar**  
**Operation Manager**

**Thematic Focus:** The Next Generation of Information Technologies

### **Description of Organization**

Onlylocal Inc. is federally incorporated company with headquarters in Toronto, Ontario, and branch offices in Mississauga, Ontario and India. Onlylocal is a wireless applicaiton protocol (WAP) -enabled local search engine, with a focus on mobile devices currently in research and development that offer Web search and image search in different languages through mobile and stationary devices.

### **Research Interests / Product Development & Business Opportunities**

The company's focus is on developing a WAP-enabled search engine for both personal computers and mobile devices. Our main research and development focus is to minimize the download time for recovering search results and localization of the results in different languages.

### **International Partners/Alliances**

Our main objective from this international partnership is to form an alliance with companies who are interested in our research program and in joining our team to develop this software.

### **Mission Objectives**

To identify collaborative work with Indian researchers and software companies, in order to produce technically sound software for the mobile communications industry and other areas like mobile search, mobile commerce and mobile businesses.



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**Mr. Trevor Taylor**  
**Director, Strategic Sales**

**Thematic Focus:** Earth sciences and disaster mitigation technologies

### **Description of Organization**

PCI Geomatics is a world-leading developer of geomatics software (geographic modeling, measurement, analysis, and output) and solutions based on its remote sensing, digital photogrammetry, spatial analysis and cartographic editing programs. The company is a privately held Canadian corporation headquartered in the Toronto area with another large facility in the National Capital Region. Its software products and solutions are distributed through a direct sales force, international resellers and third-party developers.

Founded in 1982, PCI Geomatics began building and shipping geomatics software to clients around the world when the industry was still young and the potential of geospatial information was just beginning to be realized. Since then, the company and its reputation have continued to grow as a result of innovative leadership, active geomatics community involvement and a strong dedication to earn the trust of customers using PCI Geomatics technology.

Today, with Geomatica Technology, PCI Geomatics provides all the imagery-centric geomatics solutions necessary to meet the expectations of a large and expanding industry. PCI Geomatics is continuously driven to make new and better applications for the geomatics world. We know that this is something that the industry needs. But more importantly, we also know that this is something that today's customers want.



## **Pentech Science Corporation – Canada**

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Web: [www.pentechscience.com](http://www.pentechscience.com)

**Dr. Syed M. Ahmed**  
**President and Chief Scientific Officer**

**Thematic Focus:** Sustainable and alternative energy and environmental technologies

### **Description of Organization**

Pentech stands for and is devoted to "Pollution Prevention and Environmental Technologies."

Pentech Science provides contract management/monitoring and consultation services related to electrochemical processes in metallurgy, acid mine drainage, solar hydrogen energy, photocatalytic processes and preventive environmental technologies. It undertakes contract R&D in environmental technologies such as solar and ultraviolet (UV) technologies for water detoxification, and solar thermal technologies for water distillation, desalination, steam and power generation, and cyanide removal.

Processes and equipment developed by Pentech Science include:

- a high-power, 10 kW UV reactor for water detoxification by photocatalytic oxidation of highly toxic organic pollutants, pesticides, PCBs, solvents, dioxins, micro-organisms, toxins, etc.
- pesticide removal by UV photocatalysis
- a cascade and sprinkler system for cyanide removal from water
- a solar parabolic, UV and infrared concentrator for detoxification of waste water and industrial effluents, water distillation and desalination, and steam and power production
- a database software application for an energy service company (NES Energy) to collect field survey data in New York

### **Mission Objectives**

Our main objective is to promote and find partners for the installation of a medium-sized combined test plant of (1) solar parabolic concentrators for solar UV radiations for catalytic detoxification of water from organic pollutants; and (2) solar infrared radiations for water desalination, and steam and power generation. Bangalore in South India is only about 15 degrees north of the equator and is one of the best locations for harnessing solar energy. The major obstacles in India are high initial capital costs for imports and absence of know-how.

Our mission objectives will be to:

- present the potential of the technology in meeting the requirements in India
- establish contacts and seek new potential partners for joint ventures
- explore means of cutting capital costs and import duties by local, joint manufacturing of the heavy metal frames that are needed in large numbers and that are difficult to import. If possible, we would like to visit potential sites for solar installations.

### **International Partners/Alliances**

- Mr. Ian Cameron, MA, Business Development and Project Management, Springtec International, Environmental Technologies ([www.springtecinternational.com](http://www.springtecinternational.com))
- Unique Metalizers, Manufacturing Firm, Toronto, Canada ([www.uniquemetalizers.com](http://www.uniquemetalizers.com))
- Z.U. Mecci, B.Sc., B.Eng., MS Mech.Eng.; and H.U. Macci, Financial Management, Bangalore India (email [hasebmacci@yahoo.com](mailto:hasebmacci@yahoo.com))



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**R. K. Moorthy**  
**President**

**Thematic Focus:** The Next Generation of Information Technologies

**Description of Organization**

Mr. R. K. Moorthy is the President of Pinnacle Business Consulting Inc., Ontario, Canada and is also the Chair of the Infotainment Committee of the Indo Canada Chamber of Commerce, Toronto, Canada. ICCC has over 1000 members and contributes towards networking and building of business relationship between India and Canada. Pinnacle promotes business relationship between these countries especially in the area of Infotainment – animation, visual effects, new media, etc.

**Research Interests/Product Development & Business Opportunities**

As Chair of the Infotainment Committee of ICCC, Mr. Moorthy has been spearheading the efforts of ICCC in the Infotainment field. This committee is also recognized by the Focus India initiative of the Government of Canada as its working committee. During the Technology Summit in New Delhi, Mr. Moorthy will formally conclude the participation of Indian business leaders for the forthcoming Indo-Canada business roundtable, proposed by ICCC to be held in October 2005. Mr. Moorthy, along with Canadian business leaders attending the summit, will be looking for partners in animation, visual effects, new media and related fields.

Mr. Moorthy, as President of Pinnacle will explore the potential for children’s education/entertainment in animated products for TV, home video/DVD and merchandising.

Another aspect of his interest is to assess the scope of research on the synergies, potential and obstacles for forging business relationship that we in ICCC want to launch. As Director of Kahani, a start-up company, Mr. Moorthy is also interested in exploring research potential in respect of consumer behavior and marketing potential for children’s entertainment using animation and special effects.

**International Partners/Alliances**

Mr. Moorthy will network with leading business leaders in animation, visual effects, new media etc. Some suggested names are Mr. Biren Ghose, Animation Bridge, Ashish Kulkarni, former CEO Jadoo, Ms. Zarina Mehta of UTV, etc.

**Mission Objectives**

To network, initiate research, build business relationships and bring India and Canada closer in the area of Infotainment.



**PolarSat Inc.**  
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**Mr. David Owers**  
**Director, Key Accounts**



**Mr. Manuel Perez**  
**Director, Key Accounts**

**Thematic Focus:** The Next Generation of Information Technologies

**Description of Organization**

PolarSat is an international manufacturer of full-meshed VSAT (Very Small Aperture Terminals) networks allowing for the satellite-based transmission of telephone, data and video. VSAT networks provide organizations that have geographically dispersed locations with efficient communications facilities in areas of the world where conventional telecommunications infrastructures are lacking.

PolarSat's VSATPlusII TDMA-DAMA technology is particularly well suited for complex private networks applications. PolarSat's FlexiDAMA system using SCPC-DAMA technology provides telecommunications solutions ranging from simple telephone connectivity to complex intelligent data services such as LAN/WAN and Internet access, and broadcast applications like video-conferencing and tele-education.

**International Partners/Alliances**

PolarSat cultivates relationships with selected service providers, system integrators and network operators whose industry-leading technologies and practices complement our own. With strategic partnerships and alliances, we are increasing the depth of our product and service offerings, tightly linking solution sets and services to our customer-specific business requirements.

The following are a few of our partners and alliances:

- ST Electronics (Satcom & Sensor Systems) Pte Ltd.
- Astutechnologies Satellite Communication Consultants
- The Digital Video Broadcasting Project
- Telenor Satellite Networks AS
- The Global VSAT and TSAT2150

**Mission Objectives**

We are currently seeking agents to cover different regions of India. The ideal candidate must be a system integrator that has knowledge of the satellite telecommunications sector or of the telecommunications sector. The company must have proven experience working in past telecommunications projects and if possible in VSAT systems.





**Privy Council Office (Government of Canada)**

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**Dr. Arthur Carty**  
**National Science Advisor to the Prime Minister**



**Mr. Paul Dufour**  
**Senior Advisor (International)**

**Thematic Focus: All**

National Science Advisor provides advice on the full range of issues related to research and the impact of science considerations on public policy. The Advisor works closely with the National Advisory Council on Science and Technology in developing S&T priorities and directions. The National Science Advisor also works directly with the Prime Minister and the Cabinet.

**Participant Biographies**

Dr. Arthur Carty is the National Science Advisor (NSA) to the Prime Minister. Before his appointment as NSA in April 2004, he was President of the National Research Council of Canada (NRC), the federal government's leading knowledge and innovation organization, for 10 years. Dr. Carty has a PhD in Chemistry from Nottingham University. Prior to joining NRC in July 1994, he spent two years at Memorial University and then 27 years at the University of Waterloo, where he was successively Professor of Chemistry, Chair of the Chemistry Department and Dean of Research.

Dr. Carty still maintains an active research group at NRC and continues to publish in his field of synthetic chemistry and metallic clusters. He has over 300 publications in refereed journals, and five patents in addition to book chapters and review articles. He is a former President of the Canadian Society for Chemistry, Honorary Fellow of the Chemical Institute of Canada and of the Fields Institute for Research in the Mathematical Sciences and a Fellow of the Royal Society of Canada. Among his many awards are the Alcan Award of the Chemical Institute of Canada, the E.W.R. Steacie Award of the Canadian Society for Chemistry, the Montreal Medal of the Chemical Institute of Canada and the Purvis Award of the Society of Chemical Industry. He has received 10 honorary degrees from Canadian and foreign universities, is an Officer of the Order of Canada and is an Officier de l'Ordre national du Mérite of France.

He serves on the board of directors of several organizations, including the Canadian Space Agency, the Communications Research Centre and MITACS, a federal Network of Centres of Excellence. He is Chairman of the Board of the Canadian Light Source and of the International Advisory Board of the APEC Center for Technology Foresight.

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Paul Dufour is the Senior Advisor for International Affairs at the Office of the National Science Advisor in the Government of Canada's Privy Council Office. He is on secondment from the International Development Research Centre, where he is the Special Programme Assistant for the project on Research on Knowledge Systems. He was Ministerial Assistant to Canada's Secretary of State for Science, Research and Development, where he was responsible for providing advice on matters affecting Canada's S&T policy as well as serving as an interface with the scientific and technological community.

Prior to this position, he was Senior Analyst with the Science and Technology Strategy Directorate at Industry Canada, where he was responsible for advising the government on domestic and international S&T matters, especially with regard to implementation of Canada's S&T strategy. He was also International S&T Relations Advisor with the Secretariat to the Prime Minister's Advisory Council on Science and Technology.

Mr. Dufour is a Senior Fellow of the International Science Policy Foundation and a Research Associate with the Program of Research in Innovation Management and Economy, University of Ottawa. Born in Montreal, Mr. Dufour was educated at the Université de Montréal and Concordia University in the history of science and science policy, and has had practical S&T policy experience for over two decades. He lectures regularly on science policy and has authored numerous articles on international S&T relations and Canadian innovation policy. He is series co-editor of the Cartermill Guides to World Science (Japan, Germany, Southern Europe and the United Kingdom are the most recent books in this series) and North American editor for the newsletter *Outlook on Science Policy*.



**Process Research ORTECH Inc.**  
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**Dr. Vaikuntam I. Lakshmanan**  
**Vice-Chairman and Chief Executive Officer**

**Thematic Focus:** Nanoscience and nanotechnology

### **Description of Organization**

Process Research ORTECH (PRO) is a privately owned organization serving the mining, metallurgical, recycling and chemical industries. Recognizing the need for sustainable development for these industries, the company has expanded to offer its clients process technologies for economic advantage, environmental stewardship and societal care. PRO offers services in technology development, technology transfer, pre-commercialization trials, engineering assistance, market evaluation and development, and sustainable development.

### **International Partners/Alliances**

PRO has signed memorandums of understanding (MOUs) with the following Indian technology organizations:

- Central Manufacturing Technology Institute (CMTI), located in Bangalore, for the development and transfer of technologies in the areas of: nanotechnology and materials for energy/fuel cell design, development and testing
- Central Pulp & Paper Research Institute (CPPRI), located in Saharanpur, for the development and transfer of technologies in the areas of: removal of colour from pulp and paper mill effluents and water recycling
- National Council for Cement and Building Materials (NCB), located in Haryana, for the development and transfer of technologies in the areas of: enhanced utilization of fly ash including production of green concrete, and Clean Development Mechanism (CDM) projects in cement manufacture and construction
- Mahindra Process Design and Engineering Company, located in Mumbai, for the development and transfer of technologies in the area of wastewater treatment
- Enmas Engineering Pvt. Ltd. (ENMAS), located in Chennai, for the development and marketing of the TORBED process technology in India

PRO, jointly with the Canadian International Development Agency (CIDA), has carried out projects in India with shared resources on wastewater recycling for textile industries in Tirupur, on an environmentally friendly biomass combustion plant, and value-added product development for rural India on food using innovative TORBED technology with the Murugappa Group.

As a follow-up to the CIDA-assisted program, an MOU with Mahindra has been signed and discussions with the Central Pollution Control Board are ongoing for the development of a combined effluent treatment plant in Tirupur. This will help in the commercialization of PRO's wastewater treatment technology.

PRO has two consultants working in India: Dr. Deepak Kantawala, a former Vice-President of Mahindra, in Mumbai; and Mr. Prabhakaran, President of The Srivari Group, in Coimbatore.

PRO currently has several active proposals as a follow-up to the MOUs with national research institutes in India:

- proposal submitted to the Central Pulp and Paper Research Institute on wastewater treatment and development of a water recovery process for the Indian pulp and paper industry
- techno-economic proposal submitted to the Central Pollution Control Board for the recovery of water for a 300-cubic-metre day plant
- proposal on nanotechnology – green automotive cars in collaboration with Electrovaya, a Mississauga-based company with a major battery manufacturing operation in Canada.

In addition, discussions are ongoing with the National Council for Cement and Building Materials on green concrete.

The above examples reflect PRO's commitment to participating at the policy level with the Government of Canada, Canada India Business Council and Indo-Canadian Chamber of Commerce. At the industry level, PRO has actively participated in environmental, nanotechnology, and science and technology initiatives in both the public and the private sector.

PRO participated in the 2002 Canada Trade Mission to Mumbai and Delhi, which was led by Pierre Pettigrew, then the Minister of International Trade. Dr. Lakshmanan also accompanied the trade missions led by Herb Dhaliwal, Minister of Natural Resources, in 2003 and by Jim Flaherty, Ontario's Finance Minister, in 2004.

Dr. Lakshmanan made a presentation emphasizing PRO's contributions at the Pravasi Divas 2005 in Mumbai and participated in the Science & Technology Panel there. He also made a presentation to the Planning Commission of India and submitted briefings to the Planning Commission on strategic technologies for India's competitiveness in the global marketplace.



**Queen's University (Office of Research Services)**

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**Lorna Jean Edmonds, BA, MHA, PhD**  
**Director, Office of Research Services**

**Thematic Focus:** Biotechnology, health research and medical devices

### **Description of Organization**

It is Queen's University's vision and mission to be the quality leader in Canadian higher learning, developing exceptional students and scholars for citizenship and leadership in a global society. The University will build on the strength that is Queen's – students, faculty, staff and alumni – to be among the best of internationally known universities in Canada, recognized for:

- the exceptional quality of undergraduate and graduate students and programs in the arts, sciences and professions
- the intellectual power and value of research and scholarship by faculty members and students
- the exemplary service of the University and that of its graduates to the community and the nation and the community of nations

### **Research Interests**

Queen's University, one of Canada's leading universities, is home to many outstanding scholars and researchers striving to create a just, equitable and prosperous world. With a robust foundation in engineering, health sciences, natural sciences, law, business, social sciences and the humanities, Queen's has built strong affiliations with industry, research networks, hospitals, community agencies and governments across Canada. Increasing global access to alternative energy sources such as fuel cells, solar and wind is a strategic priority for Queen's. Research in telecommunications, power electronics, high-performance computing, and robotics and biomedical engineering is bringing products and services to a global audience. Preventing infectious diseases, enhancing the performance of crop plants to stabilize and improve yields, and understanding the impact of the sun on wireless technology are key to the University's contributions to the world. Collaborations with industry and academic partners across the globe are essential to translating the results of research into benefits for our increasingly globalized society and economy.

Research centres and community resources affiliated with the University include:

- Biological and Health Sciences
- Queen's Cancer Research Institute
- National Cancer Institute of Canada – Clinical Trials Group
- Centre for Neuroscience Studies
- Centre for Health Services and Policy Research
- Centre for Studies in Primary Care
- Science and Technology
- High-Performance Computing Virtual Laboratory
- Human Mobility Research Centre
- Sudbury Neutrino Observatory
- Centre for Advanced Ceramics and Nanomaterials
- Environment Management
- Paleocological Environmental Assessment and Research Laboratory
- Centre for Water and the Environment
- Fuel Cell Research Centre
- GeoEngineering Centre
- Humanities and Social Sciences

- Centre for International Relations
- Institute of Intergovernmental Relations
- Centre for the Study of Democracy
- John Deutsch Institute for the Study of Economic Policy

### **International Partners/Alliances**

The University maintains exchange programs with more than 80 universities located in 28 countries and five continents; courses are taught in 10 languages. Undergraduate students can also participate in international study through the International Study Centre at Herstmonceux Castle, East Sussex, United Kingdom.



**Queen's University (School of Rehabilitation Therapy)**

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**Dr. Malcolm Peat, MBE, MCSP, BPT, MSc, PhD**  
**Professor Emeritus, School of Rehabilitation Therapy, and**  
**Executive Director, International Centre for the Advancement of Community-Based Rehabilitation**

**Thematic Focus:** Biotechnology, health research and medical devices

**Description of Organization**

It is the vision of Queen's University to be the quality leader in Canadian higher education, preparing exceptional students and scholars for roles as leaders and citizens in a global society. The mission of the Faculty of Health Sciences is to educate health professionals and students in the biomedical sciences by conducting research, by generating a spirit of inquiry, and by serving the health needs of the people of southeastern Ontario, drawing on the University's learning environment to enable our graduates to become the leading health professionals for Canada's rural, northern and urban communities, and to provide researchers and educators for the nation's future.

The School of Rehabilitation Therapy is well known for high-quality professional programs in Occupational Therapy and Physical Therapy and excellent master's and doctoral research programs in Rehabilitation Science. There are four programs at the School, all at the graduate level. There are 24-month master's professional programs in Occupational Therapy leading to the degree of MSc (Occupational Therapy) and in Physical Therapy leading to the degree of MSc (Physical Therapy), each being the entry-level degree to practice. There are master's and doctoral research programs in Rehabilitation Science, leading to the degree of MSc (Rehabilitation Science) and PhD (Rehabilitation Science) respectively. Two streams are offered: Human Motor Performance and Disability in the Community.

**International Partners/Alliances**

Faculty and personnel from the School of Rehabilitation Therapy and the International Centre for the Advancement of Community-Based Rehabilitation have worked extensively in research and development, rehabilitation science and community development with partners in over 30 countries in the Asia-Pacific region, Middle East, Central and Eastern Europe, Western Europe, Africa, Central America, and North and South America. They have ongoing affiliations with rehabilitation schools, government and non-governmental agencies and other institutions.



**Queen's University (Faculty of Health Sciences)**

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**Dr. Dick Zoutman, MD, FRCPC**

**Professor of Pathology & Molecular Medicine / Medical Director of the Joint Infection Control Service /  
Chief of the Joint Microbiology Service / Attending Physician, Infectious Diseases Service**

**Thematic Focus:** Biotechnology, health research and medical devices

**Description of Organization**

It is the vision of Queen's University to be the quality leader in Canadian higher education, preparing exceptional students and scholars for roles as leaders and citizens in a global society. The mission of the Faculty of Health Sciences is to educate health professionals and students in the biomedical sciences by conducting research, by generating a spirit of inquiry, and by serving the health needs of the people of southeastern Ontario, drawing on the University's learning environment to enable our graduates to become the leading health professionals for Canada's rural, northern and urban communities, and to provide researchers and educators for the nation's future.

**Research Interests of the Faculty of Health Sciences**

Queen's has a long and proud tradition of excellence in research, ranging across the full spectrum of health sciences studies, including basic biomedical, applied clinical, health services and health of populations in medicine, nursing, rehabilitation, community health, epidemiology and health policy.

Research in the Faculty of Health Sciences, conducted in partnership with affiliated hospitals, community agencies and industry, is organized through 11 trans-departmental groups representing our research strengths. These groups, which are both system-based and disease-based, include Cancer, Neurosciences, Gastrointestinal Diseases Research Unit, Cardio-Circulatory-Respiratory, Musculoskeletal Disease and Reproduction, and Development and Sexual Function. They are organized across systems: Protein Function and Discovery; Genetics, Environment and Human Health; Health Services and Policy; and Primary Care.

Health research in the affiliated hospitals is a critical component of the research endeavour. Our hospitals have active programs in basic biomedical sciences, clinical research, clinical trials, health services and epidemiology. Research at each hospital is closely linked to the Faculty of Health Sciences' strategic directions and personnel, but also includes areas of research, such as infectious diseases, more specifically focused on the mission of each hospital.





**Queen's University (Fuel Cell Research Centre)**  
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**Dr. John G. Pharoah**  
**Assistant Professor**

**Thematic Focus:** Sustainable and alternative energy and environmental technologies

**Description of Organization**

**Queen's University**

A 163-year commitment to innovation continues to nurture the development of facilities and resources worthy of a world-class academic institution. The Queen's campus provides the right learning landscape with all the tools required for outstanding scholarship.

Since 1841, Queen's has played a pivotal role in developing national leaders. From our ivy-covered buildings, students go out into the world to achieve greatness in their own lives, help shape their country's destiny, and make a lasting difference in society.

**Fuel Cell Research Centre**

A Fuel Cell Research Centre has recently been established at Queen's University. The Centre brings together researchers from two local educational institutions: Queen's University and the Royal Military College of Canada. The Centre builds upon several years of applied fuel cell research spanning solid oxide fuel cells, polymer electrolyte fuel cells, hydrogen production and storage, fuel processing, computational modelling of transport phenomena and economic modelling. Researchers at the Centre also work closely with the Centre for Manufacturing of Advanced Ceramics and Nanomaterials ([www.ceramics.queensu.ca](http://www.ceramics.queensu.ca)) to conceive, design and build novel fuel cell materials.

**Research Interests**

Dr. Pharoah's research interests are focused on a better understanding of fuel cell operation and performance, with a view to improving fuel cell performance, decreasing cost and improving lifetimes. The current focus is on detailed computational modelling using high-performance parallel computing and experimental validation of the models.

Current research projects include:

- advanced modelling for design of polymer electrolyte fuel cell flow-field plates
- in-situ and ex-situ characterization of liquid water transport in polymer electrolyte fuel cells
- computational modelling of solid oxide fuel cells
- the role of radiation heat transfer in solid oxide fuel cells
- microscopic modelling of transport in solid oxide fuel cells
- computational modelling of metal hydrides for hydrogen storage
- design and analysis of micro solid oxide fuel cells for vehicle auxiliary power units
- detailed diagnostic tools for polymer electrolyte fuel cell stacks

**International Partners/Strategic Alliances**

Dr. Pharoah currently has some involvement with the U.S. Department of Energy through the Solid State Energy Conversion Alliance (SECA). He works with Fuel Cell Technologies, who are a sub-contractor to Siemens-Westinghouse, and he attends SECA meetings. It is anticipated that activity will increase in this regard. Additional international collaborations are being pursued in Norway, Switzerland and Germany.

## **Mission Objectives**

Dr. Pharoah's primary objective is to meet international researchers and companies who are interested in collaborating. As a relatively new faculty member, he finds it particularly important to meet international colleagues and to begin to foster professional relationships in order to produce truly world-class research.



**Queen's University and Kingston General Hospital (Human Mobility Research Centre)**

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**Dr. J. Timothy Bryant, PhD, P.Eng.**  
**Chair, Scientific Committee, Human Mobility Research Centre**

**Thematic Focus:** Biotechnology, health research and medical devices

### **Description of Organization**

The mission at the Human Mobility Research Centre (HMRC) is to help people live fuller, more mobile lives by pioneering the development of innovative and effective treatment strategies for bone and joint disorders caused by arthritis, osteoporosis, injury and related problems.

HMRC serves as the focus for collaboration between the disciplines of engineering, medicine, health sciences, computer information, and rehabilitation. This synergy makes HMRC an international leader in the study of bone and joint disorders. HMRC's unique location within Kingston General Hospital and on the Queen's University campus makes the Centre readily accessible to both health care professionals and academics, thereby increasing the frequency of interaction and creating a rich and fertile research environment. This physical proximity has proved to be a considerable advantage in expediting technology transfer from research laboratory to patient. In addition, HMRC, in conjunction with Kingston General Hospital, Queen's University, and the Canada Foundation for Innovation, is constructing one of the world's most advanced operating suites for computing and imaging.

Technical staff at HMRC support the research of 37 clinical and academic faculty members and 55 graduate students, including orthopaedic residents and post-doctoral fellows. With this combined expertise, HMRC is in a unique position to collaborate with industry in the development of medical devices, including biomechanical testing, modelling and product evaluation.

Laboratories in HMRC allow for full-spectrum research, from molecular research through to prototyping new implant designs. HMRC's 9,000 square feet include laboratories dedicated to research involving:

human motion / analysis prosthesis design/ connective tissue / bio-simulation / tissue processing / computer imaging  
medical computing / clinical testing

### **Product Development & Business Opportunities**

HMRC recognizes the important role industry plays in getting new technologies and products to patients. The Centre's role in this process takes the form of creating spinoff companies or providing expertise and access to resources for existing companies. Accomplishments in technology transfer over the past four years include two spinoff companies, five medical device patents and five patent disclosures. In addition, two major clinical trials have been undertaken and six new orthopaedic surgical techniques have been developed. A number of devices have been produced that are marketed worldwide, including an elbow replacement and a prosthetic foot for landmine survivors.

### **International Partners/Alliances**

The broad-based research conducted at HMRC attracts global leaders in advancing methods, treatments and products to enhance mobility. In addition, formal international collaborations have been formed with researchers in countries including Japan and Australia.



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**Mr. Craig Murray**  
**Vice-President, Manufacturing/Value-Added Processing**

**Thematic Focus:** Sustainable and alternative energy and environmental technologies

### **Description of Organization**

Saskatchewan Research Council (SRC) is Saskatchewan's leading provider of applied R&D and technology commercialization. SRC is a major research and development organization, which provides contract research, technology transfer and analytical services to companies in the province and around the world. We take leading-edge knowledge developed in Saskatchewan by SRC and sell it to the world and, at the same time, bring the best knowledge the world has to offer and apply it to unique Saskatchewan situations.

SRC was established in 1947 to advance the development of the province in the physical sciences. Today, SRC has evolved to become a market-driven corporation, selling services and products to companies in Saskatchewan and around the world. The corporation has more than 225 staff. Annual revenues are about \$26 million and growing.

### **Research Interests/Product Development & Business Opportunities**

SRC is involved in the development of projects and products focused on alternative energy sources for transportation that reduce global warming, reduce urban smog, increase energy supply and lower fuel costs.

Our current alternative energy product emphasis is on hydrogen, natural gas and ethanol vehicles. SRC meshes cleaner fuels with smart technology to make these vehicles a viable option, competitive with conventionally fuelled vehicles in driving range and operating costs.

SRC recently unveiled the world's first dual-fuel hydrogen-gasoline and hydrogen-diesel pickup trucks.

### **International Partners/Alliances**

Discussions are under way to develop partners and alliances in current area of interest.

### **Mission Objectives**

SRC's objective is to develop partnerships to further develop, demonstrate and commercialize our hydrogen and compressed natural gas technologies worldwide.



**SciMed Laboratories Inc.**  
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**Dr. Rajan Gupta**  
**Chief Executive Officer**

**Thematic Focus:** Biotechnology, health research and medical devices / Nanoscience and nanotechnology

### **Description of Organization**

SciMed Laboratories Inc. is a privately held diagnostic product development company dedicated to the development and commercialization of state-of-the-art diagnostic and analytical products within the nutritional and clinical industries. Our proprietary diagnostic products will be sold globally using direct and indirect distribution channels. Two of our kits, VitaKit ATM and VitaKit DTM, are currently in multi national beta-testing, and will be commercialized in the fourth quarter of 2005.

### **Research Interests / Product Development & Business Opportunities**

SciMed's proprietary products are based on in-house developed technologies that use a combination of a rapid fat-extraction process/methodology for use in all milk and other food products, and two proprietary and novel monoclonal antibodies (Mabs) for the analysis of vitamin A and vitamin D respectively.

Using these two technological components, SciMed has produced the VitaKit A and the VitaKit D, which are ELISA-based diagnostic test kits initially for use within the liquid milk dairy industry. The commercial availability of these products will allow primary test labs and milk processors to perform rapid and cost-effective analysis of these two vitamins in liquid milk samples and in other high-growth market areas for the food and clinical industries.

Research and development is also ongoing with SciMed's Nutri-Chip diagnostic products. These diagnostic products, based on nanotechnology principles of micro fluidics and state-of-the-art nanochip technology, are to be designed to allow the company to incorporate its fat extraction process and antibodies to produce the next generation of analytical vitamin A and D diagnostic products. SciMed will develop other NutriChip tests for the detection of the presence of residual antibiotics and rBST (growth hormones) in food.

Nutritional deficiencies are widely spread in developing countries, and therefore SciMed would be able to capitalize not only the potential market for its diagnostic kits, but would strategically look at partnering opportunities for its Nutri-chip™ based pipelines products that have commercial applications in food and clinical industries.

### **International Partners/Alliances**

In order to achieve global presence for our kits, we are looking for partners or alliances in marketing and distribution activities. A distribution agreement has been finalized for the European market. In addition, to further our interests for our pipeline products based on Nutri-Chips (Biomems technology), we are exploring strategic partnerships to advance the commercialization activities.

### **Mission Objective**

SciMed Laboratories Inc. is committed to focusing on the research, development, and commercialization of expeditious, cost-effective and technologically advanced diagnostic and analytical tools that improve the care of the individual and lower the burden on the health care system.



**Shastri Indo-Canadian Institute**  
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**Ms. Jan Knowles**  
**Executive Director**



**Dr. Arun Murkherjee**  
**President**



**Mr. Ravi Seethapathy**  
**Chair, Canadian Advisory Council**

**Thematic Focus:** Promoting mutual awareness and understanding between India and Canada through facilitating academic activities.

**Description of Organization**

The Shastri Indo-Canadian Institute (SICI) is a unique educational enterprise that promotes mutual awareness and understanding between India and Canada mainly through facilitating academic activities. Founded in 1968 by joint announcement of the Government of Canada and the Government of India, the Institute signed its first Memorandum of Understanding (MOU) with the Government of India on November 29, 1968. The Institute signed the most current Addendum (Addendum VIII) to its MOU with the Government of India in 2003. Funding for Institute activities comes from our inst 23 institutional members in Canada and 32 in India, the governments of India and Canada, the community at large and the private sector.

Historically, SICI’s academic and scholarly interests focused on the social sciences, humanities and cultural activities as set out in the Institute’s latest VIII Addendum to its MOU with the Government of India. In 2003, the Government of India broadened SICI’s mandate to include the following new areas: law, science, technology, economics, management, environment, public health and education (including distance education).

For nearly four decades, the Shastri Institute has played an important role in building cultural and academic bridges between India and Canada. The Institute has awarded a vast number of fellowships and scholarships to Canadian and Indian scholars, writers, journalists, and performing artists to promote knowledge building and understanding of each other’s country. SICI is an important vehicle for furthering the Canada-India relationship and has established and strengthened relationships between the academic, research, government, business and cultural communities in Canada and India.

In 2005, the Institute has become a fully binational organization and expanded its membership to include for the first time institutes of higher learning and research in India. With broadened membership base and expanded mandate, the Institute is now entering an exciting new future.

For a complete listing of the Institute’s members in Canada and India, please visit the Shastri Institute Web site at <http://www.sici.org>.

## **Research Interests / Product Development & Business Opportunities**

The Shastri Institute provides individual fellowships in the areas of sciences, humanities, and cultural activities and also supports research in the new areas such as: law, science, technology, economics, management, environment, public health and education (including distance education).

Additionally, the Shastri Applied Research Project (SHARP) aims to contribute to poverty reduction and sustainable development in India through support for binational policy research projects in the following areas:

- ▶ economic reform — the impact of globalization, liberalization and private-sector development on poverty and basic need
- ▶ environmental management — balancing economic growth and environmental sustainability
- ▶ social development — health sector reform and capacity building at a local level

Funded by the Canadian International Development Agency (CIDA), the SHARP projects provide an important platform for institutional linkage and collaboration between Canada and India.

## **International Partners/Alliances**

The Shastri Institute now includes 32 Indian members including universities, research institutions, law schools, Indian Institutes of Management and Indian Institutes of Technology.

For complete listing of the Institute's Indian members, please visit the Shastri Institute web-site at <http://www.sici.org>.

## **Mission Objectives**

The Institute will use the mission as a catalyst to facilitate connections between its member communities in India and Canada. SICI plans to:

- ▶ showcase current research initiatives and capacities of its members and academic community in Canada and India
- ▶ mobilize SICI's science and technology working group among Indian members
- ▶ facilitate dialogues between participating Canadian and Indian researchers with a view to enhancing collaboration and promoting new linkages between India and Canada
- ▶ discuss with the Institute's members in India and Canada what could be the role of the Institute in promoting Canadian-Indian participation in science and technology initiatives
- ▶ demonstrate SICI's interest and current capability in serving as an effective bridge for facilitating linkages between academia in Canada and India, business and government





## **Sheridan Institute of Technology and Advanced Learning**

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Web: [www.sheridaninstitute.ca](http://www.sheridaninstitute.ca)



### **Dr. Satyendra Narayan**

#### **Professor of Applied Computing, Academic Advisor**

**Thematic Focus:** Earth sciences and disaster mitigation technologies

#### **Description of Organization**

Sheridan Institute, founded in 1967 as a postsecondary institution dedicated to serving the needs of students, employers, and the province of Ontario, today serves over 14,000 full-time students at its Brampton and Oakville campuses and its satellite Skills Training Centre. It is known for academic excellence, computer-assisted ‘mobile learning,’ and applied research, taught by dedicated faculty to motivated students in an invigorating environment.

With six academic schools focused on applied computing, environmental technology, engineering sciences, computer animation, visualization design, e-digital technologies, e-commerce, advanced manufacturing, community services and corporate training, Sheridan builds on its worldwide reputation in the field. Sheridan’s capacity for innovation is reflected in the Sheridan Centre for Animation and Emerging Technologies and its Centre for Advanced Manufacturing and Design Technology. Sheridan has recently administered applied research initiatives of approximately \$20 million in research funding, ranging from smaller-scale research by individuals to multi-disciplinary, consortium-based projects supported by provincial and federal funding agencies.

Sheridan offers approximately 100 programs, of which 30 are post-diploma certificates, many of which link academically to three-year diploma programs. Sheridan currently has four applied degree programs: the Bachelor of Arts (Animation), which builds on its worldwide reputation in the field, Bachelor of Applied Arts (Illustration), Bachelor of Applied Health Sciences (Athletic Therapy) and Bachelor of Applied Information Science (Information Systems Security). Sheridan’s established program excellence in Montessori teacher education represents another niche opportunity for an applied degree. Given the current disposition of academic content, Sheridan can build on its very solid program base to offer up to twenty degrees within a short transition period. Sheridan also currently offers joint baccalaureate degrees: a Bachelor of Design in cooperation with York University; a Bachelor of Arts with University of Toronto at Mississauga in both Art and Art History, and Theatre and Drama Studies; and an Honours Human Kinetics degree with the University of Guelph, offered with our Sports Injury Management Diploma. Thanks to SuperBuild funding, Sheridan is also developing a significant baccalaureate program in Computing Network Communication with the Brock University and in Communication, Culture and Information Technology (CCIT) with the University of Toronto at Mississauga, in a new facility which was opened in September, 2003.

There are also opportunities to offer post-graduate training in animation, applied computing, engineering sciences and environmental technology, where Sheridan clearly has demonstrated significant academic leadership. Sheridan currently collaborates with the University of Toronto Masters of Science in Biomedical Communication. Animation industry recruiters have cited Sheridan as the best Canadian institution for training in their industry, and among the four best in the world along with CalArts, Ringling, and the New York School of Visual Arts. Development of the potential for future collaboration at the post-graduate level with universities will further enhance the academic options open to students at Sheridan.

#### **Research Interests / Product Development & Business Opportunities**

The Office of Research at Sheridan is responsible for the conduct and support of all applied research initiatives at the institute. Recently, it has administered a program of approximately \$20 million in research funding ranging from smaller scale research by individuals to multi-disciplinary, consortium-based projects supported by provincial and federal funding agencies.



Sheridan is committed to a program of applied research having already established two research centres at our Trafalgar Campus (the Visualization Design Institute and the Sheridan Elder Research Centre). This commitment reflects our mission to provide exceptional applied learning opportunities enhanced by applied research and taught by outstanding faculty in a student centered environment. In conjunction with our Advanced Manufacturing and Design Technologies Centre (AMDTC) at the Brampton Campus, Sheridan intends to broaden its applied research capacity with a research centre to be established at AMDTC.

The infrastructure and support that promotes the development and facilitation of research activities of Sheridan faculty include:

- ▶ the Visualization Design Institute (VDI), located in the Sheridan Centre for Animation and Emerging Technologies — established over six years ago with federal and provincial funding, the VDI investigates the application of computer visualization and simulation technologies in a number of fields; all its work has been with external partners, both public and private at the provincial, national and international levels
- ▶ the Sheridan Elder Research Centre (SERC), whose mission is to identify, develop, test and support implementation of innovative strategies that improve the quality of life for older adults and their families — SERC was also established with federal and provincial funding, and houses a number of unique labs in a naturalistic environment
- ▶ Sheridan SPARK, our business incubator developed in partnership with the Town of Oakville — SPARK supports the creation and expansion of new enterprises within the community and fosters growth in Ontario's digital media industry, and is positioned to capitalize on the shared value of research initiatives, intellectual property (IP) and opportunities for joint projects by developing a commercialization and technology transfer process enabling researchers to move IP from lab-to-market more readily

### **International Partners/Alliances**

Sheridan has wide experience dealing with international activities, such as:

- ▶ education and training initiative in China — in May 2004, Sheridan signed 6 memoranda of understanding for collaboration on delivery of Sheridan's English as a Second Language, Computer Science Technology and Mechanical Engineering Technology programs
- ▶ Solid Waste Management Centre (SWMC) initiative — in April 2005, Sheridan launched a training centre with the Indian Institute of Sciences (IISc, Bangalore, India) and Regional Research Laboratory (RRL, Bhopal, India) to disseminate know-how to Indian communities to improve waste management practices and to parent suitable technologies in partnership with the University of Waterloo and Terralog Technologies Inc., Calgary, Alberta, under the project development fund from the Canadian College Partnership Program (CCPP)
- ▶ Environmental Education Initiative, India, 1995 — part of Canada-India Institutional Cooperation Project sponsored by CIDA and ACCC
- ▶ the Visualization Design Institute, an applied research and development unit that focuses on the design of advanced computer visualizations and simulations — established six years ago, the VDI is a multi-disciplinary laboratory that works through collaborative partnerships (Japan, Kazakhstan, McMaster University & University of Waterloo) in the areas of scientific, medical, engineering, educational, cultural and environmental visualization
- ▶ Equador Project (Espol), a joint venture between Sheridan and Espol in Equador
- ▶ Japan Science and Technology Internship Program — with Sheridan since 1996.

### **Mission Objectives**

- ▶ To undertake applied research, education, training initiatives and similar activities in India and Thailand in applied computing, environmental technology, computer visualization and simulation, digital technologies, engineering sciences, computer animation arts and design, community services and corporate training
- ▶ To establish joint collaborative or partnership programs for applied research and education
- ▶ To undertake education, training, research and development initiatives, partnership programs, and collaborative research programs in India and/or Thailand in the area of hydrogeological and geophysical investigations to delineate and mitigate the natural disasters associated with geological hazards, mining hazards and waste disposal hazards in partnership with the Department of Earth Sciences, University of Waterloo (Professor M.B. Dusseault and Professor Steven Evans)



## **Smartpark Development Corporation**

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**Building a community  
of innovators**

**SMARTPARK**  
Research and Technology Park

### **Mr. Alan Simms President**

**Thematic Focus:** Biotechnology, health research and medical devices

### **Description of Organization**

Smartpark is the University of Manitoba's research and technology park. The park brings together research and technology companies and organizations with the University's research community.

Smartpark's vision is to "Build a Community of Innovators" on the doorstep of the University. The park has experienced tremendous success in developing land and space for lease to companies and organizations involved in broad research areas that coincide with research expertise at the University.

Smartpark facilitates university-industry research collaborations and innovation, creates a high-tech cluster that attracts similar companies to the region and nurtures an environment and culture that assists in retaining highly skilled students and researchers in the region.

### **Research Interests/ Product Development & Business Opportunities**

Companies and organizations in Smartpark are involved in four strategic areas of research:

- information and communications technology/ engineering and advanced materials/ health and biotechnology / agricultural and nutritional sciences

Leasing opportunities exist for any company involved in research or product development in one of these four areas.

Smartpark has a number of benefits to offer:

- ▶ potential for research and development work with the University of Manitoba
- ▶ easy access to the North American market, including the NAFTA trade zone with reduced or no duties, tariffs or taxes
- ▶ a close-knit business community in Winnipeg
- ▶ a very economical city for business costs and cost of living

### **International Partnerships/Alliances**

Smartpark is acting as a consultant in the early stages of development of a research and technology park at the Universidad de Concepción in Concepción, Chile.

### **Mission Objectives**

To identify any agriculture, biotech or ICT companies interested in establishing an office in Smartpark Research and Technology Park, and to establish business relationships which will be pursued on future visits.

An opportunity exists for these companies to establish offices in Smartpark that will bring them closer to their clients in North America and provide a launching point from which to maintain a closer degree of cooperation with these companies. Smartpark is the ideal location for this venture with its central location in North America.



**Soft Science Associates Ltd.**

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**Mr. Eric Harris**  
**Vice-President**

**Thematic Focus:** The Next Generation of Information Technologies

**Description of Organization**

Soft Science is a documentary media and video production company that is now experimenting with the latest in High Definition technology. We have produced several programs featuring Indian non-governmental organization work and many documentaries focused on environmental issues. We are also interested in animation.

**Research Interests/Product Development**

We are currently working with the Shastri Indo-Canadian Institute and Toon Boom Animation Inc. (Montreal) to develop a new educational software package. This software will have an "iconic" interface and is intended to be "language neutral." We hope it will interest students of animation (including non-English speakers) around the world. Our focus is on storytelling, and we hope to be able to introduce beginners to a wide range of useful story animation design techniques.

**International Partners/Alliances**

We are interested in alliances with Indian schools and universities currently teaching animation design.

**Mission Objectives**

To meet parallel business leaders from India and to explore possible joint educational research opportunities.



**Sophia Hilton Foundation of Canada**

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**Dr. Brenda Beck  
President**

**Thematic Focus:** The Next Generation of Information Technologies

**Description of Organization**

We are a charitable foundation focused on developing media-based products for educational applications. Among other things, we are currently working on a 52-episode animation of a traditional South Indian folk epic. We hope that our product will be used in schools and universities across India and Canada.

**Research Interests/Product Development**

We are experimenting with how to bridge the wide gap between sophisticated animation software and the skills of traditional Indian folk artists. To carry our research forward, we will be conducting a series of experimental seminars and workshops in India and in Canada to which folk artisans will be invited. Combined with the use of practical laptop "Tablet" computers, we will be teaching animation and storytelling techniques. Our hope is that these artisans will take an interest in digital storytelling, providing a route via which they can market their own stories to much wider audiences.

**International Partners/Alliances**

The Sophia Hilton Foundation is closely allied with both the Shastri Indo-Canadian Institute and the Madras Craft Foundation. We are now searching for additional partners, particularly people working through India's many educational institutions.

**Mission Objectives**

- To assess the interest of educational institutions in our work on the animation of a 52-episode folk epic from South India
- To assess the extent of Indian interest in seminars/workshops that reach out to folk artisans interested in learning story animation techniques



**SoshaCom International Corporation**

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**Mr. Shanker V. Rao**  
**President and Chief Executive Officer**

**Thematic Focus:** The Next Generation of Information Technologies

**Description of Organization**

SoshaCom is a Canadian, federally incorporated company with its headquarters in Ottawa, Canada's capital; it develops communication solutions and systems for governments, enterprises and service providers.

**Research Interests / Product Development & Business Opportunities**

SoshaCom develops state-of-the art solutions to electronic communications issues, by designing, managing, and deploying, business-ready operational information communications systems. SoshaCom has developed and demonstrated wireless broadband high speed mobile connectivity solutions on fast-moving vehicles.

**International Partners/Alliances**

SoshaCom has developed commercial and partnership alliances with governments as well as commercial corporations including ISPs and software developers in India. SoshaCom is entering into a joint venture (private-public partnership) with a West African country to provide nation-wide access to high speed communication.

**Mission Objectives**

We strive to make communications technology a competitive advantage for our clients and partners by providing innovative new solutions. The objectives for this mission are to establish relationships to provide networking and connectivity solutions for vertical markets (for example, geographic information systems).

**Supan Technologies Inc.**

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Email: [sudhvarma@yahoo.ca](mailto:sudhvarma@yahoo.ca) / [supantech@sympatico.ca](mailto:supantech@sympatico.ca)Web: [www.supantech.com](http://www.supantech.com)**Dr. Sudhanshu Varma  
President****Thematic Focus:** Sustainable and Alternate Energy and Environmental Technologies**Description of Organization**

Supan Technologies Inc. was established in 1997 with the aim of developing promising advanced materials processing technologies and globally marketing such technologies and related products. The company currently conducts its research and offers technical consultancy in the fields of photovoltaics, electronic ceramics and materials processing in space in collaboration with government research laboratories, universities and other industries with complementary expertise and facilities. However, the company's primary business interest is in the field of photovoltaics.

**Research Interests/Product Development & Business Opportunities**

Supan's current research interests are in the fields of photovoltaics, infrared glasses and fibres, materials research in space, containerless processing of materials, electronic ceramics, smart structures, gas sensors, etc. The company, in collaboration with its business associates, offers the following products and services to emerging photovoltaic manufacturers:

- supply of complete solar cell and module production lines
- supply of individual equipment, custom automation and production tools/jigs
- technical services such as manufacturing plant layout, facility planning, equipment installation and commissioning, technical documentation, manufacturing technology transfer, training, pilot production, etc.
- sourcing of photovoltaic manufacturing materials and marketing of finished products
- photovoltaic research and consulting

Supan has recently signed a memorandum of understanding with a company in India, Khandelwal Solar Power Limited, for setting up a joint venture for silicon solar cell and module manufacturing at Pitampur (near Indore) in Madhya Pradesh. Supan will supply equipment, technology, production materials and ongoing technological support and upgrades for this venture to keep it globally competitive for years to come.

**International Partners/Alliances**

Supan works in close collaboration with many research organizations, universities, industries and business associates. These include:

- Fineline Fabrications Inc., Springtec International and Spectra-Nova Technologies Inc. (All of Ottawa, Ontario)
- Omnix Technologies Corporation, Wrentham, Massachusetts, United States of America
- Materials Technology Laboratory, CANMET/Natural Resources Canada, Ottawa, Ontario, Canada
- Queen's University, Kingston, Ontario, Canada
- Ryerson University, Toronto, Ontario, Canada
- Sensor Technology Ltd., Collingwood, Ontario, Canada
- Khandelwal Solar Power Limited, Mumbai, India
- The U Group, San Jose, California, United States of America

**Mission Objectives**

To develop promising advanced materials processing technologies and to globally market such technologies and related products.



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**Mr. Michel Godard**  
**Director, Land Management**

**Thematic Focus:** Earth sciences and disaster mitigation technologies

### **Description of Organization**

Established in 1961, TECSULT has provided services in Canada and abroad and has quickly become one of the leading consulting engineering firms both at home and on the world market. During this time, its constant development has resulted in the implementation of projects covering most branches of engineering in over sixty different countries. TECSULT has become a world leader in the fields of forestry, hydroelectric development and hydraulic structures, environment and development of human resources. It is also well-known for its achievements in areas such as energy generation, transmission and distribution, transportation, industrial installations, buildings, municipal engineering, agriculture, geomatics, textile industry management, project management, territorial management, mines, town planning, economy and finance, information technologies and technical assistance to management. Since 1996, TECSULT has applied a certified ISO 9001 quality management system. International projects represent approximately 40 percent of TECSULT's activities. The head office is located in Montreal. Teconsult has a multi-disciplinary team of 1,100 employees.

### **Business opportunities**

In the course of this commercial mission to India, Teconsult would like to set alliances to develop projects in the following fields of activities:

- ▶ geomatics and land management: use of geomatics (geographic information systems, remote sensing, photogrammetry, mapping, etc.) to design and implement disaster management plan and watershed master plan.
- ▶ forestry: inventory for forest-ecosystem management and institutional support and training
- ▶ environment: ecological studies in order to establish impact studies and development of programs and institutional support

### **Alliances**

One goal of this mission is to establish alliances with local companies. We would like to develop a partnership with a reputable company involved in geomatics, forestry or the environment that is considering, for instance, the Tsunami Reconstruction Project (World Bank funding) and that could be interested to partner with TECSULT to pursue this and other project .

### **Mission objectives**

- To establish a partnership with a company that could represent TECSULT in India and be a partner in project execution
- To establish contact with local task managers from the multilateral funding agencies (the World Bank or the Asian Development Bank) involved in the Tsunami Reconstruction Projects. For instance, Shyamal Sarkar, (New Delhi, [ssarkar@worldbank.org](mailto:ssarkar@worldbank.org) Tel.: 91 11 2461 7241) is identified as contact point in World Bank documentations.
- To establish contact with the end users of these Tsunami Reconstruction projects. For example, on the Procurement notice published in the United Nations Development Business (ref.: WB1654-656/05, India - Emergency Tsunami Reconstruction Project ), two agencies are identified:

**TAMILNADU:**

Revenue Administration, Disaster Management and Mitigation Department

Officer: Special Commissioner and Commissioner of Revenue Administration / State Relief Commissioner (or) Officer on Special Duty (Relief and Rehabilitation)

Postal Address: Ezhilagam, Chepauk, Chennai-5, TamilNadu, India.

Tel: (91-44) 2852-3299, 2852-8475.

Fax. (91-44) 2854-6624, 2841-1654.

E-mail: relief@tn.nic.in.

**PONDICHERRY:**

Revenue Department

Officer: Mr. Ragesh Chandra, Additional Secretary (Revenue) or Mr. A. Vincent Rayar, Revenue Officer.

Postal Address: Revenue Complex, Saram, Pondicherry – 605013, India.

or Office of Additional Secretary (Revenue), Revenue Complex, Saram, Pondicherry – 605013, India.

Tel: (91- 413) 224-9060





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**Mr. Paul Bush**  
**Vice-President, Broadcasting & Corporate Development**

**Thematic Focus:** The Next Generation of Information Technologies

### **Description of Organization**

Telesat is one of the early pioneers in satellite communications and systems management. Created in 1969, the company made history with the launch of Anik A1 in 1972 – the world's first domestic communications satellite in geostationary orbit operated by a commercial company.

Based in Ottawa, the company owns and operates a fleet of satellites for the provision of broadcast distribution and telecommunications services across the Americas, and is a highly respected consultant and partner in satellite ventures around the world. Telesat has offices throughout Canada, in the United States and in Brazil.

Telesat's experience is rooted in the unique challenge of bridging Canada's vast distances. Because satellites are the most cost-effective way to transmit television signals to numerous widely dispersed sites, most of the nation's broadcasters rely on Telesat to deliver their programming to cable operators from coast to coast. Telesat's voice and data transmission services enable major telephone companies to extend their services to remote areas of Canada.

Telesat also provides satellite-based wireless data networks across Canada and the United States, and provides related ground segment and maintenance services to a broad range of financial, retail, industrial and commercial companies and government organizations that require voice, data and video applications.

With over 35 years of engineering and technical experience, Telesat is a leading consultant in the establishment, operation and upgrading of satellite systems worldwide, having provided consulting services to businesses and governments in more than 30 countries. The company has developed a wide range of specialized services designed to assist satellite operators, spacecraft manufacturers and companies involved in the field of satellite communications around the world. These service offerings encompass satellite consulting services, satellite operations and tracking services, and flight dynamics software development.

### **Research Interests/International Partners**

Telesat's state-of-the-art Applications Development Laboratory generates national and international attention through the demonstration and promotion of new leading-edge satellite-based services for Canadians and customers around the world.

Most of the projects supported by the Lab are based on partnerships with industry and research organizations, building a strong foundation for long-term cooperation. These include the Canadian Space Agency, the European Space Agency, Industry Canada, the World Broadcasting Unions, and others. The Lab hosts many concurrent applications that are continually updated based on demand and changing priorities.

### **Mission Objectives**

Provide an overview of Telesat's efforts in the rollout of rural telecommunications over the last three decades. Provide examples of what Telesat has done in Canada to ensure that all Canadians have access to advanced broadcasting and telecommunications services. Lastly, to draw parallels to India from the Canadian experience of providing broadband services to all of its citizens, regardless of where they live.



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**Mr. Francisco Del Cueto**  
**Chief Technology Officer**

**Thematic Focus:** The Next Generation of Information Technologies

### **Description of Organization**

Toon Boom Animation Inc. is the worldwide leader in animation software solutions. Toon Boom carries several leading animation products, including Harmony, Opus and Studio. Toon Boom Harmony's superior toolset, with morphing, inverse kinematics and glue, makes it the solution for any studio wanting to create the highest-quality animation cost-effectively. Toon Boom Opus is the industry standard for traditional animation production. As for Toon Boom Studio, this application is the ideal tool for individuals. Toon Boom also offers consulting and training services dedicated to increasing animation production efficiency and quality. With these great offerings, Toon Boom Animation is well poised to continue delivering quality, efficiency and reliability to the animation community – for all animation styles and formats.

Market-leading studios using Toon Boom's products include Nelvana, Klasky Csupo, Warner Bros., Paramount Pictures, Universal, Mercury Filmworks, Wild Brain, King Camera, Cromosoma and Lanterna Magica, to name a few. Prestigious productions done with Toon Boom's technology include *Les Triplettes de Belleville*, *Looney Tunes: Back in Action*, *Rugrats*, and *The SpongeBob SquarePants Movie*.

In 2005, the Academy of Television Arts & Sciences granted a Primetime Emmy® Engineering Award to Toon Boom Opus, the leading animation software solution for traditional studios. Toon Boom Opus was recognized for its major contribution made to the advancement of the television animation industry.



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**Dr. Martin Kirk, Ph.D.**  
**Associate to the Vice-President, Research & International**

**Thematic Focus:** Sustainable and alternate energy and environmental technologies / next-generation information technologies

### **Description of Organization**

Situated in the heart of the Canadian prairies, Calgary, Alberta is the home to Canada's thriving energy sector and the second-largest concentration of corporate head offices among Canadian cities. The University of Calgary (U of C) is the jewel in the city's crown, embracing a spirit of ideas, enterprise and initiative, a willingness to challenge conventional thinking, and a deep sense of the importance of return to community.

As one of Canada's top seven research universities, innovation, discovery and learning are at the heart of all that we do. Revenues from sponsored research reached \$282 million in 2004/05.

The University has a bold research goal to join the elite league of top five research intensive universities in Canada by 2010. "Accelerating Research" is the strategic plan deployed to help reach this ambitious goal.

The university belongs to 17 Networks of Centres of Excellence, which are an innovative national approach to research and development to improve the Canadian economy and quality of life. Approximately 75 chairs and professorships in such areas as American studies, schizophrenia, project management, cancer and intelligent manufacturing attract globally renowned scholars and leading researchers to the U of C.

Calgary is headquarters to the majority of Canada's petroleum corporations and key energy regulatory agencies. It is also a city that is steadily increasing its reputation as a leading international centre for energy technology and environmental management expertise. The U of C has made vital contributions to these industries and continues to design targeted education and research programs that answer to the expanding needs of the petroleum sector.

For almost 40 years, the U of C has blended insight and experience with the intellectual resources of Canada's top industries: business management, petroleum, medicine, engineering, social sciences, law, environmental design, education and communication and culture, to name a few.

The university is broadening opportunities for students to take inquiry-based courses that lead to greater critical thinking skills, increased exposure to research methods and greater access to leading edge scholars. Our efforts have raised our global profile, enhanced the quality of our undergraduate and graduate programs, promoted innovation and excellence in scholarly activity and provided significant returns and tangible benefits to our community and economy.

The U of C's Academic Plan, adopted in 2002, raises the quality of the University's programs, while attracting world-class faculty, researchers and students. Areas of investment and expansion include understanding human behavior, institutions and cultures; technologies and information; energy and the environment; and, health and wellness.

### **International Partners/Alliances**

The University of Calgary has agreements or research collaboration in India with Oil and Natural Gas Corporation Ltd; Institute of Reservoir Studies (1999) — Chemical and Petroleum Engineering, the University of Pune (1998), and Rani Durgavati Vishwavidyalaya University (2002 — Mathematics). The U of C also has agreements, student exchange programs and research collaborations with many universities world-wide.



**University of Calgary (Schulich School of Engineering)**

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University of Calgary

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**Dr. Karan V.I.S. Kaler PhD, PEng.  
Professor of Electrical and Computer Engineering**

**Thematic Focus:** Biotechnology, health research, medical devices / Nanoscience, nanotechnology / The Next Generation of Information Technologies

**Description of Organization**

The Schulich School of Engineering, located on the University of Calgary campus, is the fastest-growing engineering school in Canada. The School is committed to being first choice in Canada for accredited engineering education, for internationally acclaimed research and for service to the community and the engineering profession.

The University of Calgary is located in the city of Calgary, the fastest-growing city in North America and Canada's engineering capital. Our bold ten-year strategic plan takes us definitively in the direction of this goal. Resting on the cornerstones of education, research, community and working environment, our focus is to aimed at attaining the following outcomes:

*Undergraduate education*

- attracting and educating the best students from Calgary, Alberta, Canada and beyond through the quality and relevance of our undergraduate programs, the excellence of the learning experience, and the support we offer
- producing well-qualified engineering graduates who are the first choice of local and regional employers, and increasingly of employers and universities in other parts of Canada and around the world
- increasing first-year enrolment to 1,000 students by 2013, in two or more steps

*Research and postgraduate education*

- being one of the top three engineering faculties for research in Canada, with international leadership in several additional selected areas by 2013
- being internationally competitive in attracting and retaining top academics and attracting graduate students
- having international recognition as a leading faculty for postgraduate engineering programs with 1,000 postgraduate students by 2013, with at least one third at the doctoral level

*Community*

- further enhancing the essential links with the community that ensure our relevance and responsiveness, and translate high-quality performance into a superior reputation

*Work environment*

- providing faculty members, staff and students with a supportive and attractive environment for work and study

**Research Interests / Product Development & Business Opportunities**

The Schulich School of Engineering creates innovation by combining outstanding people, divergent perspectives, state-of-the-art facilities, focus and time.

Engineering research at the Schulich School of Engineering uncovers solutions to issues that affect people now and in the future. Our expert research teams span the research continuum from discovery at the basic engineering science level, to

prototyping and testing, to technology commercialization and then back again. Multi-disciplinary, international and industry collaborations characterize our approach to research and provide the intellectual infrastructure to solve unique problems. Multi-disciplinary facilities such as the Calgary Centre for Innovative Technology (CCIT) augment the physical support to grow our world-class research to a higher level.

The Schulich School of Engineering is strategically focused on six main areas of study; bioengineering, information technologies, infrastructure and materials, advanced manufacturing and design, hydrocarbon and energy research, and environmental engineering. Each area, rich in expertise, covers a broad range of related research sub-areas.

Over time, our expertise will continue to produce innovation and to directly improve the quality of life of people in Canada and abroad.

### **International Partners/Alliances**

International participation has been an important component of the Schulich School of Engineering's strategic plan over the last three decades. The School has engaged in a variety of international activities, including undergraduate and graduate education, industry training and research collaborations. Many faculty members have made significant contributions to international engineering activities.

Collaboration is a fundamental element of all activity at the Schulich School of Engineering. From student group activities to critical research, the Schulich School of Engineering fosters a collaborative environment built on mutual needs, experiences and benefits. Through internships and exchange programs that elevating our students' experience, industrial research that advances knowledge, multidisciplinary initiatives with other faculties that diversify the scope of how we examine problems, and joint efforts with other universities that expand the knowledge used to approach an inquiry, the Schulich School of Engineering sees true value in its collaborative initiatives and continues to grow in this direction.

The Schulich School of Engineering, recognizing the need to build upon its close associations with the engineering community and industries in the Province of Alberta and throughout Canada, established the Engineering Associates Program (EAP) in 1991. The EAP provides an opportunity for industry to advise the Schulich School of Engineering on all aspects of its activities. Engineering leaders, from corporations of all sizes and from all sectors, come together with members of the School to build relationships in which new developments and important aspects of engineering education and research are highlighted.

Our collaborative partnerships are as diverse as they are many. Industry and alumni give generously of their time, expertise and resources to help drive initiatives that benefit the school and industry alike. This kind of support helps to ensure our relevance and responsiveness in our research, programs, and various other projects. The Schulich School of Engineering is extremely supportive of its partnerships in all endeavors and encourages the School's connection within the community and engineering industry.

### **Mission Objectives**

The objective of this mission to India will be to identify academic institutions, governmental agencies and private-sector organizations that are similarly engaged in teaching and or research activities and to seek to establish collaborative in areas of mutual interest.

Attracting the best professors, students, and staff coupled with superb facilities will ensure quality educational experiences as well as research and scholarship of global stature, exemplifying our commitment to excellence.

A strategic focus on active national and international collaborations, together with a recognition of the importance of satisfied stakeholders, diversity, clear communication, and an entrepreneurial approach will enable the school to respond to new global realities.



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**UNIVERSITY  
OF MANITOBA**

**Dr. Digvir S. Jayas**  
**Associate Vice-President, Research**

**Thematic Focus:** Biotechnology, health research and medical devices

**Description of Organization**

The University of Manitoba is the province's largest, most comprehensive and only research-intensive post-secondary educational institution. Founded in 1877, it was Western Canada's first university. In a typical year, the University has an enrolment of approximately 24,000 undergraduate students and 3,200 graduate students.

The University offers 79 degrees, 51 at the undergraduate level. Most academic units offer graduate studies programs leading to master's or doctoral degrees. In 2004-2005, the University acquired more than \$91.1 million in research operating funds. The University currently holds 33 Canada Research Chairs, is the network leader of one of Canada's 21 Networks of Centres of Excellence (ISIS Canada) and is a participant in 14 others. It is also home to a wide range of research centres and institutes.

Within the past decade, Smartpark Research and Technology Park was established with the assistance of the provincial and federal governments and is maturing as an environment where collaborations between university and industry enhance the commercialization of new technologies.

**Research Interests**

Functional foods and nutraceuticals, bioproducts, nanotechnology, and health biotechnology.

**International Partners/Alliances**

Initial discussions have been held with the following institutions in India:

- National Botanical Research Institute
- Central Institute of Medicinal and Aromatic Plants
- Central Drug Research Institute
- Amity Universe
- Dr. Mahalingam College of Engineering and Technology

**Mission Objectives**

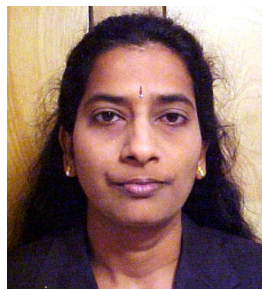
To develop collaborative research programs in areas of mutual interest; to attract companies to Smartpark (the University's Research and Technology Park) in the areas of life sciences, and information and communications technology; and to develop academic exchanges between Indian universities and the University of Manitoba.





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**Dr. Janet Light-Thompson**  
**Assistant Professor**



**Mrs. Bhuvaneswari Arunachalan**  
**Graduate Student**

**Thematic Focus:** The Next Generation of Information Technologies

**Description of Organization**

Founded in 1785, the University of New Brunswick is one of the oldest public universities in North America. Throughout its long history, it has influenced the future of thousands upon thousands of young scholars, and shaped the social and economic landscape of this country and beyond.

UNB is committed to furthering UNB’s position as the province’s centre for research and graduate studies, playing a lead role in advancing the social and economic agenda of Atlantic Canada and Canada, strengthening our learning-centered environment and to the advancement of a life-long learning agenda. UNB is a strong national university with fully-accredited programs and a strong research base and these will continue to remain its priorities.

**Mission Statement**

The University of New Brunswick, with campuses in Fredericton and Saint John, and with its diverse programs and varied activities, strives:

- ▶ to be known for its excellence in teaching by providing students with the highest possible quality instruction, library and laboratory resources which are appropriate for both undergraduate and graduate learning, and an environment conducive to the development of the whole person
- ▶ to achieve national and, in selected areas, international recognition for its research programs by capitalizing on its comparative advantages and by maximizing the benefits to be derived from its two-campus structure through reinforcement and enhancement of their individual strengths
- ▶ to serve New Brunswick, the Atlantic region and the nation through the provision of broadly educated graduates, and through the development of applied programs involving the private sector and government agencies
- ▶ to co-operate with governments and post-secondary institutions in developing a coherent system of advanced education, and to recognize the need for long-term financial stability and accountability
- ▶ to serve as a source of information and expertise to help society understand and deal with the major issues and opportunities of our time
- ▶ to encourage the development of a network of international co-operation in teaching, research and community development
- ▶ to be a responsible and responsive employer.



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**Dr. Kamiel Gabriel**  
**Associate Provost, Research and Graduate Programs**

**Thematic Focus:** Sustainable and alternate energy and environmental technologies

### **Description of Organization**

The University of Ontario Institute of Technology became a legal entity on June 27th, 2002 with the passage of Bill 109 (University of Ontario Institute of Technology Act) by the Legislative Assembly of Ontario. The university has a distinctive mandate as set out in its founding legislation. The University is to provide undergraduate and graduate university programs with a primary focus on preparing knowledge workers in areas of high demand by employers and the Durham region community. In fulfilling this objective, it will advance the highest quality of learning, teaching, research and professional practice. More specifically, UOIT is charged with advancing Ontario in the Canadian and global contexts, with a particular focus on Durham Region and Northumberland County — and facilitating student transition between college and university level programs.

#### *Vision:*

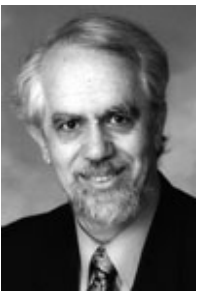
The University of Ontario Institute of Technology is an innovative and market-oriented institution, pursuing inquiry, discovery and application through excellence in teaching and learning, value-added research and vibrant student life.

#### *Mission:*

The mission of the University of Ontario Institute of Technology is to:

- ▶ provide career-oriented undergraduate and graduate university programs with a primary focus on those programs that are innovative and responsive to the needs of students and employers
- ▶ advance the highest quality of research
- ▶ advance the highest quality of learning, teaching, and professional practice in a technologically enabled environment
- ▶ contribute to the advancement of Ontario and Canada in the global context with particular focus on Durham Region and Northumberland County
- ▶ foster a fulfilling student experience and a rewarding educational (work) environment, and
- ▶ offer programs with a view to creating opportunities for college graduates to complete a university degree





**University of Ottawa**  
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**uOttawa**

L'Université canadienne  
Canada's university

**Nicolas D. Georganas**  
**Associate Vice-President, Research (External)**

**Thematic Focus:** All

### **Mission Objectives**

- Establish collaborative links between the University of Ottawa and the Indian Institutes of Technology (IITs), the Indian Institute of Science and universities in research and post-graduate education, with particular emphasis on funded international research
- Establish University of Ottawa R&D collaboration with the private and government sectors
- Promote University of Ottawa and affiliated institutes' research and intellectual property in health, food biotechnology, information technology, molecular sciences, hazard mitigation and disaster management
- Foster commercialization of intellectual property and technology transfer from joint Canada-India research projects
- Bring more than 20 years of Canadian expertise in multimedia technologies ([www.mcrlab.uottawa.ca](http://www.mcrlab.uottawa.ca)) and collaborative virtual environments ([www.discover.uottawa.ca](http://www.discover.uottawa.ca)) to collaborative R&D efforts in infotainment and next-generation information technologies



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**uOttawa**

L'Université canadienne  
Canada's university

**Dr. Tad Murty**  
**Adjunct Professor**

**Thematic Focus:** Earth sciences and disaster mitigation technologies

**Participant Biography**

Educated in India and later in the USA, Dr. Murty specialized in the mitigation of natural disasters. Specifically, his background is in meteorology and physical oceanography. He specialized in the mathematical modelling of natural marine hazards such as cyclones, storm surges, waves, river floods and tsunamis under climate change. Dr. Murty has over 40 years of experience in developing computer models for risk analysis and prediction of vulnerability to coastal infrastructure. He also has a great deal of experience in developing warning systems for cyclones, floods and tsunamis, especially suitable for long-term planning of coastal zone development as well as short-term evacuation of the public in the event of real disasters.



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**Dr. Bryan T. Schreiner, P.Eng., P.Geo.**  
**Director, of Research Services and Assistant of Vice-President Research**

**Thematic Focus:** Earth sciences and disaster mitigation technologies

### **Description of Organization**

The University of Saskatchewan is a critical education and research resource as well as a key driver in economic and social development. With 7,500 employees, the U of S is a significant employer. The U of S attracts over \$100 million in research revenues annually. The University has created over 33 spin-off companies with collective revenues in excess of \$190 million and 1,400 employees. The University draws over 1,000 international students annually and works in numerous countries around the globe.

### **Research Interests/ Product Development and Business Opportunities**

The University of Saskatchewan is renowned for the application of biotechnology in the agriculture industry. Saskatoon's biotechnology infrastructure is worth some \$1.5 billion dollars. It is home to several leading federal and provincial research centres and Innovation Place, one of North America's most successful research parks with 127 companies employing more than 2,000 individuals. The U of S is the only Canadian university with a combination of colleges devoted to the study of human, animal and plant life. Its science cluster is unmatched in Canada, comprised of the Canadian Light Source, a broad array of health science colleges, and the Vaccine and Infectious Diseases Organization (VIDO).

Industry and government agencies as well as institutions similar to universities take advantage of the services and products produced by the University of Saskatchewan. Agbiotech companies, pharmaceutical companies, crop development agencies and engineering firms are just a few examples.

### **International Partners/Alliances**

The University of Saskatchewan has been active in many markets domestically and internationally, in particular in China, Korea, Mongolia as well as Eastern Europe. The U of S does not have a local agent or representative in foreign countries.

### **Mission Objectives**

The University of Saskatchewan has special capabilities and strengths in biotechnology, health research and medical devices, nanoscience and nanotechnology, sustainable and alternate energy and environmental technologies, information and communication technologies, earth sciences and disaster mitigation technologies.

The expectation is to identify specific opportunities for promoting the capabilities of the University of Saskatchewan to develop market potential for the expertise and services we offer, particularly in the research aspects of the areas outlined above. Identifying collaborators and partners to work with in developing new projects and services for use in the international market place is another goal.



## University of Saskatchewan (Department of Veterinary Biomedical Sciences)

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### **Dr. Baljit Singh** **Professor of Veterinary Anatomy**

**Thematic Focus:** Biotechnology, health research and medical devices / Nanoscience and nanotechnology

### **Description of Organization**

The University of Saskatchewan is the largest academic and research institution in the province of Saskatchewan, and a leading force for technology and innovation in Canada.

The U of S plays a crucial role in creating knowledge through research, then transferring that knowledge to society, both through students and through technologies developed by researchers. About half the research and development activity in the province happens at the U of S, in fields as diverse as atmospheric and space science, medicine, agriculture, engineering, and environmental technology. In the last 10 years, U of S research income has more than doubled to nearly \$116 million per year.

As of 2001, the latest year for which figures are available, companies spun off from U of S technology boasted \$190 million in revenues and employed over 1,300 people. Enterprises started by faculty and graduates push this total even higher. Many of these companies are based on campus at Innovation Place, one of North America's most successful research parks.

The University has also become a hub of activity that draws academic, government and industry researchers from across the country and around the world. Major on-campus government research organizations include the National Research Council Plant Biotechnology Institute and the Agriculture and Agri-Food Canada Saskatoon Research Centre. A highlight is the Canadian Light Source, Canada's only synchrotron. Opened in 2004, the U of S-owned, \$174-million facility is beginning to shed light on diverse areas of inquiry. A few examples are fertility and cancer, corrosion of metals, lubricants that prevent wear in engines, new medicines to prevent and treat disease, and next-generation communications devices.

Another major U of S research facility, the Vaccine and Infectious Disease Organization (VIDO), has built a decades-old reputation for excellence based on innovations like the world's first genetically engineered vaccine. VIDO is a major contributor in efforts to control diseases such as *E.coli* O157. Together with the Colleges of Medicine and Veterinary Medicine, VIDO is collaborating with international partners to create the International Vaccine Centre (InterVac) on campus. This \$76-million U of S facility, due to open in 2009, will be one of the largest vaccine research laboratories in North America. It will empower researchers to combat current and emerging diseases such as severe acute respiratory syndrome (SARS), West Nile virus, and avian influenza.

As the only university in Canada with every professional college represented on campus, the U of S is an ideal environment for interdisciplinary research and for scholarly and artistic work. From agriculture to engineering, from commerce to law, from kinesiology to arts and science, the U of S offers a breadth of expertise and opportunity found nowhere else in Canada.

### **Research Interests/Product Development & Business Opportunities**

The U of S offers business and product development opportunities in the areas of biotechnology, vaccine development, infectious diseases, molecular design, nanotechnology and nanomedicine.

### **Mission Objectives**

The U of S hopes this summit will help in identifying new academic and industrial collaborations between Canada and India and will further stimulate research into aspects of biomedical nanotechnology. Because respiratory diseases continue to be a major and rising problem in developing countries, there may be possibilities for research collaboration in this area as well.



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**Dr. Ranjana P. Bird**  
**Dean of Graduate Studies**

**Thematic Focus:** Biotechnology; health research and medical devices; Nanoscience and nanotechnology; The Next Generation of Information Technologies

**Description of Organization**

The University of Waterloo, a relatively young institution established in 1957, has become one of the top research universities in Canada and has built its reputation as the most innovative university in the nation.

The University offers undergraduate and graduate degrees in six different faculties: Arts, Applied Health Sciences, Engineering, Environmental Studies, Mathematics and Science. The Faculty of Mathematics is the largest faculty of its kind in the world. The University of Waterloo is known for its leadership and strength in cooperative education and excellence in science and technology. Many graduates from Waterloo are recognized for their entrepreneurial qualities, and Waterloo has served as the "birthplace" of over 150 spinoff companies.

The University of Waterloo has expanded its educational mandate to meet the demands of the future by having programs in a wide variety of disciplines of emerging need and prominence, including new programs involving quantum computing and nanotechnology, which draw on mathematics, physics, chemistry and engineering, as well as a multidisciplinary approach to health sciences focusing on but not limited to psychology, behavioural research, social aspects of health and quality of life, aging, optometry and pharmacy, and medical engineering. In its educational programs, the University recognizes that to produce future leaders and academics, the fusion of science and technology with societal and cultural values and scholarship is essential.

The University of Waterloo has many research centres and institutes and is involved in a number of national Networks of Centres of Excellence focused on areas as diverse as the automotive industry, water and stem cells.

At the University of Waterloo, one-third of all graduate students are international, representing 90 nations around the world. The University is committed to being an active international partner and contributor to innovation, research and development for the benefit of Canada and the world at large.



**The University of Western Ontario**

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**Mr. Dan Sinai**

**Manager, Research Development**

**Thematic Focus:** All

**Description of Organization**

The University of Western Ontario (also known as “Western”), located in London, Canada, midway between Toronto and Detroit, is one of Canada’s oldest universities. Today, The University of Western Ontario is a vibrant centre of learning, with 1,164 faculty members and almost 29,000 undergraduate and graduate students. Through its 12 faculties and schools and three affiliated colleges, the University offers more than 60 different degree and diploma programs.

**Research Interests**

Research is an integral part of the University’s mission and Western is one of Canada’s leading research-intensive universities. With nearly \$190 million in annual research funding, The University of Western Ontario is one of Canada’s top ten research universities.

Based upon criteria of excellence, demonstrated by both by individuals and groups, Western has identified four fields of research strength for which it has achieved a significant measure of national and international recognition:

- ▶ life sciences and the human condition
- ▶ human and physical environment
- ▶ social trends, public policy, and economic activity
- ▶ culture, analysis and values

**Mission Objectives**

Western has already established very solid links with institutions in India, notably the Indian Institute of Technology Kanpur and the Indian Institute of Technology Roorkee. While the primary focus of the mission will be to build on these relationships in the areas of science and engineering (especially in areas such as electrical and chemical reactor engineering and disaster management), we hope to foster further interactions in the humanities and social sciences (such as gender studies and economics development). Our specific mission objectives are to:

- ▶ expand the role of the University in India through collaborative research and exchange agreements in all scientific fields and higher education
- ▶ establish contacts with private companies, institutes of technology and other universities in India
- ▶ foster the commercialization of intellectual property through joint Canada-India research projects
- ▶ promote the University of Western Ontario and its affiliated research Institutes in the areas of Health and Life Sciences, Natural and Physical Sciences and Social Sciences and Humanities



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**Mr. Chandrasekar Kuppuswamy**  
**Vice-President**

**Thematic Focus:** The Next Generation of Information Technologies

### **Description of Organization**

Webesolution Inc. is a software development company with corporate headquarters in Mississauga, Canada, and subsidiary offices in the United States. Webesolution Inc. delivers services and products to companies involved in wireless research.

### **Research Interests/Product Development & Business Opportunities**

- design and implement a Bluetooth-based mobile information kiosk system
- build a client PDA/server (an AP connected to a PC)
- multi-player PDA games over wireless networks
- interactive geographical maps over the Internet

### **International Partners/Alliances**

Webesolution is looking for Indian R&D software development companies to enter into a joint venture or strategic partnership for Bluetooth R&D software development. If Indian companies would like to utilize our infrastructure in Canada, we would be happy to assist them for R&D and other software development services.

### **Mission Objectives**

Identify researchers and developers in the field of wireless communications, establish linkages with Indian R&D companies and academic institutions, and further collaborate with them for technology tie-ups.





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**Mr. Terry Wason**  
**Regional Sales Director, India and South Asia**

**Thematic Focus:** The Next Generation of Information Technology

### **Description of Organization**

Wi-LAN is a global provider of broadband wireless communications products and technologies, offering businesses, including telecom service providers and government enterprises effective, economic and secure wireless high-speed communications solutions. Wi-LAN specializes in high-speed Internet access, data network extension, wireless voice-over-IP and wireless data and telephony backhaul, using its high-quality products and industry-leading technologies. Wi-LAN's broadband wireless solutions feature an all-inclusive, two-year parts and labor warranty and are supported by 24/7 customer service.

Wi-LAN is the chair company of the OFDM Forum and a charter member of the WiMAX Forum ([www.wimaxforum.org](http://www.wimaxforum.org)). Wi-LAN's common shares trade on The Toronto Stock Exchange under the symbol "WIN."

### **Research Interest/Product Development and Business Opportunities**

Wi-LAN Inc. is a technology leader in WiMAX, which is the emerging world-wide standard for wide-area networks (WANs). We are the founder members of the WiMAX forum, which is promoting worldwide acceptance of orthogonal frequency division multiplex (OFDM) as the technology for WANs. Wi-LAN has a patent for OFDM, and stands to gain as the market for WiMAX products grows. WiMAX is an ideal technology for high-speed broadband wireless for urban and rural areas. It is much cheaper and faster to deploy than the traditional wired alternatives, such as cable and fibre.

India is a prime market for this technology, because of its large rural population, which is not well connected. We have deployed close to 3,000 radios, which are ready for the WiMAX standard, operating in the 2.4 Ghz and 5.8 Ghz frequency bands. In India, 3.3-3.4 Ghz band is being made available for WiMAX; we are looking for partners with whom we can develop equipment in this band to address this market.

### **International Partners/Alliances**

Wi-LAN believes its portfolio of patents, including its core W-OFDM patents and 17 patents and patent applications acquired from Ensemble Communications in May 2004, are necessary for the implementation of devices using the IEEE 802.16 Wireless MAN (metropolitan area network) Standard and the ETSI BRAN HiperMAN standard (the WiMAX Forum (1) standards). As well, Wi-LAN's W-OFDM patents are believed to be required for the implementation of devices using the IEEE standards 802.11a and 802.11g (the second-generation Wi-Fi Alliance(1) standards), and the ETSI BRAN HiperLAN/2(1) standard. Wi-LAN licenses its patented technology and has executed non-exclusive W-OFDM license agreements with semiconductor and broadband wireless equipment companies.

Our products are deployed in over 60 countries all over the world, and we have about 150 distributors and resellers, all over the world.

### **Mission Objective**

Indian software companies have done part of our software development. Our current range of WiMAX equipment works in the 3.4-3.6 Ghz band, and we will be looking for companies that can take on hardware development work to make the equipment work in the lower band, 3.3-3.4 Ghz. We are also seeking software development companies that can develop the required software.



## NOTES

