ITS Research and Development in Canada

November 2008

This document contains:

Note that there may be some overlap between the two sections.

Inventory of Transportation-Related Research Institutes and Programs at Canadian Universities

November 2008

NB: This document contains Hyperlinks. Information access is therefore enhanced when viewed on your computer.

INSTITUTION / CENTRE / DEPARTMENT	DESCRIPTION OF RESEARCH PROGRAMME	AREAS OF EXPERTISE	CONTACT INFORMATION
BRITISH COLUMBIA			
University of British Columbia BITSAFS **Bureau of Intelligent Transportation Systems & Freight Security**	**BITSAFS** : Est. Spring 2005. Bureau exists to conduct and disseminate research on ITS and Freight Security. **Web:** http://www.freightsecurity.ubc.ca/main.cfm **Initially funded through consortium of BC Ministries & TC's ITS R&D plan: *Innovation Through R&D Partnerships*.**	Freight Security ITS	Dr. Garland Chow Director **Tel:** (604) 822-8328 **Email:** Garland.chow@saunder.ubc.ca Saunder School of Business The University of British Columbia 2053 Main Hall Vancouver, BC, V6T 1Z5 Office Cynthia Ree Administrator **Tel:** (604) 822-9420 **Fax:** (604) 822-4977 **Email:** cyntia.ree@saunder.ubc.ca

INSTITUTION / CENTRE / DEPARTMENT	DESCRIPTION OF RESEARCH PROGRAMME	AREAS OF EXPERTISE	CONTACT INFORMATION
University of British Columbia **Centre for Transportation Studies**	**Centre for Transportation Studies**: Promotes the development of research and education in transportation and logistics and facilitates the exchange of ideas and research between the faculty and the community. **Web: http://www.sauder.ubc.ca/cts/** **Project funded in 2006 under the Government of Canada's Transportation Planning and Modal Integration initiatives:** - Development of a simulation model of the movement of seaborne international containers through the Vancouver gateway in order to model the benefits and costs of alternative security options.	Transportation logistics and supply chain management, with some emphasis on aviation business as well as transportation as a whole.	Dr. David Gillen Director Centre for Transportation Studies Sauder School of Business University of British Columbia 2053 Main Mall Vancouver BC V6T 1Z2 **Office** Henry Angus 460 **Tel:** (604) 822-8352 **Fax:** (604) 822-4977 **Email: david.gillen@sauder.ubc.ca**
Simon Fraser University **Centre for Policy Research on S&T**	**Centre for Policy Research on S&T** was established in 1998 to "engage in research on the relationship between public policy and technology." The centre brings together academia, public policy figures, and industry stakeholders. **Web: http://www2.sfu.ca/cprost/**	Technology Policy and Commercialization Projects of particular interest: Dr. Adam Holbrook's "Innovation System's Research Network" And "Determining the return on investment for public funding of research in the university sector"	Adam Holbrook, Associate Director **Tel:** (778) 782 5192. **Fax:** (778) 782 5239
ALBERTA			
University of Calgary Department of Geography offers: **Transportation Theme School & Transportation Studies Major**	Interdisciplinary undergraduate programme offered by the Department of Geography in the faculty of Social Sciences **Web: http://www.geog.ucalgary.ca/index.cfm?page=content&style=subsection&this=5**	"The Theme school provides students interested in transportation issues with a mix of theory and practical experience that will help them in gaining employment in transportation sector both in Canada and around the world."	Department of Geography University of Calgary 2500 University Dr. NW Calgary, AB T2N 1N4 **geograph@ucalgary.ca**
University of Calgary **Centre for Transportation**	The **Centre for Transportation Engineering and Planning (C-TEP)** focuses on the safety and efficiency of highways.	C-TEP is an inter-departmental, inter-disciplinary programme combining the	Neil Little Executive Director

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Engineering and Planning (C-TEP)	**Web:** http://www.c-tep.com/	various Engineering faculties. C-TEP board is made up of academia, industry, consultancy, and governmental officials. For an organizational list see: http://www.c-tep.com/board.html Areas of expertise include: Road safety, driver behaviour, materials, traffic engineering and ITS.	nlittle@c-tep.com Dr. Richard Tay AMA/CTEP Chair in Road Safety Department of Civil Engineering University of Calgary Calgary AB T2N 1N4 **Tel:** 403-220-4725 **Fax:** 403-282-7026 **E-mail:** rtay@ucalgary.ca
University of Calgary Schulich School of Engineering Transportation Engineering	**Transportation Engineering** Several professors within the Department of Civil Engineering are engaged in transportation research projects. **Web:** http://www.schulich.ucalgary.ca/Civil/Transportation/index.html	Airport planning and engineering, planning of airports for new large aircraft (NLA), ITS, public transportation.	Dr. S.C. Wirasinghe and Dr. Alex de Barros Department of Civil Engineering University of Calgary Calgary AB T2N 1N4 **Tel:** 403-220-5731/220-7180 **Fax:** 403-284-3697 **E-mail**: wirasing@ucalgary.ca; debarros@alumni.ucalgary.ca
SASKATCHEWAN			
University of Saskatchewan **Dept. of Civil and Geological Engineering** **Transportation Centre**	The **Transportation Centre** has a research focus on highway traffic safety and safety standards. The safety research is funded by Transport Canada. **Web:** http://engrwww.usask.ca/research/index.php?cmd=tree_nodeID34	Traffic safety, intelligent transportation systems, mechanistic modeling of pavements, monitoring the structural health of innovative and conventional bridge decks, such as steel-free concrete deck and fibre reinforced deck system.	Dr. Curtis Berthelot Dept. of Civil & Geological Engineering University of Saskatchewan 57 Campus Drive Saskatoon SK S7N 5A9 **Tel:** 306-966-7009 **E-mail:** curtis.berthelot@usask.ca
MANITOBA			
University of Manitoba Department of Civil Engineering Transportation Engineering Group	**Department of Civil Engineering** **Transportation Engineering Group** The transportation group works closely with the Manitoba Department of Transportation, the City of Winnipeg, Transport Canada and others on the analysis, design and management of transportation networks, transport systems and infrastructure	Transportation engineering and planning, road safety, pavement design, pavement evaluation and management, freight transportation, truck traffic information systems, intelligent transportation systems, GIS applications in transportation, traffic	Prof. Al Clayton Department of Civil Engineering University of Manitoba E1-334 Engineering Bldg 15 Gillson St Winnipeg MB R3T 5V6

INSTITUTION / CENTRE / DEPARTMENT	DESCRIPTION OF RESEARCH PROGRAMME	AREAS OF EXPERTISE	CONTACT INFORMATION
	facilities. **Web:** **http://umanitoba.ca/civil/transportation/transportation.shtml**	engineering, active transportation, and sustainable transportation. .	**Tel.:** 204-474-9246 **Fax:** 204-474-7513 **E-mail:** **clayton@cc.umanitoba.ca**
ONTARIO			
Carleton University University of Ottawa **Ottawa-Carleton Institute for Civil Engineering (OCICE)** **Transportation Research Centre**	**Ottawa-Carleton Institute for Civil Engineering (OCICE)** **Transportation Research Centre** The objectives of the Transportation Research Centre are to contribute knowledge and solutions to transportation issues and problems; to foster interdisciplinary transportation research; to provide opportunities for graduate students to gain research experience; and to provide information to the public on transportation issues. **Web: http://www.ocice.ca/research/ocice_rc5.shtml** **Web:** http://www.genie.uottawa.ca/ocice/english/research/#transportation	Transportation policy, planning, management, technology assessment, study of soil properties and behaviour for determining pile capacity and integrity of pile shafts, pavement design.	Dr. A.M. Khan Director Transportation Research Centre Carleton University Department of Civil and Environmental Engineering Engineering Bldg Rm 277 1125 Colonel By Drive Ottawa ON K1S 5B6 **Tel.:** 613-788-2600 **Fax:** 613-788-3951 **Email ata_khan@carleton.ca**
Queen's University **Innovation Park (IP)**	Launched in June, 2008, **IP** is an inter-university, inter-jurisdictional initiative based at Queen's University. It was launched in conjunction with Ontario's Ministry of Technology and Innovation, through a $21 million grant from the Government of Ontario. **NB:** Like **ITL** and **CSC**, **IP** is based on a cooperative model of technology innovation, in line with the Federal R&D Strategy, focusing on interconnectivity and commercialization of research.	**Fuel Cell Research Centre** in conjunction with RMC: **http://www.innovationpark.ca/company/queens-rmc-fuel-calle-research-centre** **http://www.fcrc.ca/** Potential for investment and projects also exists within the **Advanced Materials research unit.**	Janice Mady Director **Tel:**613.533.3376 Rick Boswell Assistant Director **Tel:** 613.533.6279 945 Princess Street Kingston, Ontario K7L 5L9 Canada **Main Tel:.**613.533.3371 **Main Fax**: 1.613.533.3363
Royal Military College of Canada **Department of Civil Engineering** **Transportation Group**	**Department of Civil Engineering** **Transportation Group** Research in this area is mainly the work of Professor John Stewart.	Traffic engineering, intelligent transportation systems.	Dr. John A. Stewart Department of Civil Engineering Royal Military College of Canada PO. Box 17000, STN FORCES

INSTITUTION / CENTRE / DEPARTMENT	DESCRIPTION OF RESEARCH PROGRAMME	AREAS OF EXPERTISE	CONTACT INFORMATION
	Web: **http://www.rmc.ca/academic/civil/personnel/stewart_e.html**		Kingston ON K7K 7B4 **Tel**: 613-541-6000 ext 6371 **Fax**: 613-541-6218 **E-mail**: **stewart_j@rmc.ca**
Royal Military College of Canada **Division of Graduate Studies and Research** **Transportation and aerospace**	**Division of Graduate Studies and Research** **Transportation and aerospace** Research is carried out by faculty from several departments. **Web:** **http://www.rmc.ca/academic/gradrech/transportation_e.html**	Aerodynamics, durability of aircraft materials, radiation fields at jet aircraft altitudes, traffic engineering, pavement, ITS.	Dr. B.J Fugere Dean, Faculty of Graduate Studies and Research Royal Military College of Canada SB3034 PO Box 17000, Station Forces Kingston ON K7K 7B4 **Tel.** 613-541-6000 Ext 3854 **Fax::** 613-542-8612 **E-mail**: **fugere-j@rmc.ca** OR follow links to specific researchers from **http://www.rmc.ca/academic/gradrech/transportation_e.html**
Ryerson University **Department of Civil Engineering** **Transportation Research**	**Department of Civil Engineering - Transportation Research** Professor Bhagwant has been responsible for several transportation-related research projects, most of which focus on the application of statistical analysis to road and vehicle safety. **Web: http://www.ryerson.ca/civil/research/transportation/**	Highway safety analysis, traffic engineering, geometric design, design innovation.	**Dr. Bhagwant N. Persaud** Ryerson University Department of Civil Engineering Monetary Times Building, MON218 350 Victoria St Toronto ON M5B 2K3 **Tel.:** 416-979-5000 ext. 6464 **Fax:** 416-979-5122 **Email: bpersaud@ryerson.ca**
University of Ontario Institute of Technology (UOIT) **NB:** ***UOIT is a new university fundamentally partnered with industry and could serve as a model of private/public partnering for innovative research. It was created as part of General Motors of Canada's $2.5 billion 'Beacon Project', to***	**UOIT** is partnered with Auto21. UOIT will be home to the **Automotive Centre of Excellence** (no date specified or published) as a result of a partnership between UOIT, General Motors of Canada and the Government of Ontario. They also have an **Office of Technology Transfer and Commercialization** designed to link academia, industry, and business.	Automotive technology research. Projects of particular interest: **Dr. Remon Pop-Lliev** holds the GM Canada/NSERC research chair in **Innovative Design Engineering.**	**Dr. Kamiel Gabriel** Associate Provost, Research **Tel:** (905) 721.8668 x 2357 **Vivianne Sharpe** Administrative Assistant **Email:Vivianne.Sharpe@uoit.ca** **Tel:** (905)721.8668 x 2357 **Dr. Mike Szarka** Manager, Technology Transfer and Commercialization **mike.szarka@uoit.ca** 905.721.8668 x 2523

INSTITUTION / CENTRE / DEPARTMENT	DESCRIPTION OF RESEARCH PROGRAMME	AREAS OF EXPERTISE	CONTACT INFORMATION
which the Govt. of Ontario added $235 million.			
University of Ottawa **Ottawa-Carleton Institute for Civil Engineering (OCICE)** **Transportation Research Centre**	**Ottawa-Carleton Institute for Civil Engineering (OCICE)** **Transportation Research Centre** ***SEE** entry under* **Carleton University**		
University of Ottawa **Car Internet Research Program (CIRP)**	**CIRP** is an industry, government, and academic-sponsored automotive research program directed at understanding how new information and communication technology will impact the automobile industry. **http://www.cirp.uottawa.ca/**	Automotive preferences of consumers, automotive industry.	Dr. Christian Navarre Director Car Internet Research Program School of Management University of Ottawa 136 Jean-Jacques Lussier Ottawa ON K1N 6N5 **Tel**.: 613-562-5800 ext. 4688 **Fax**: 613-562-5164 **E-mail**: **navarre@management.uottawa.ca**
University of Toronto **Department of Civil Engineering** **Transportation Engineering and Planning Group** *including* **Joint Program in Transportation** *and* **Toronto ITS Centre and Testbed**	**Department of Civil Engineering** **Transportation Engineering and Planning Group** See Web pages below for full list of active faculty as well as for organizations and programs within the department, including the **Joint Program in Transportation** **Transportation Research Advancement Centreand** the **ITS Centre and Testbed.** **Web:** **http://www.civil.engineering.utoronto.ca/infoabout/Research/transport.htm** **Project funded in 2006 under the Government of Canada's Transportation Planning and Modal Integration initiatives:** - Development of a fully operational, University of Toronto-validated and integrated land use transportation modelling system for the Greater Toronto Area. The modeling system will support the analysis of a broad range of urban transportation and land use planning issues and infrastructure investment alternatives.	Integrated land use and transport modelling, intelligent transportation systems, public transportation operations and planning, sustainable transportation, freight transportation.	Dr. Eric J. Miller Professor Department of Civil Engineering University of Toronto 35 St. George St. Toronto ON M5S 1A4 Toronto ON N9B 3P4 **Tel.:** 416-978-4076 **Fax:** 416-978-5054 **Email:** **miller@civ.utoronto.ca** Dr. Baher Abdulhai Director, Toronto ITS Centre and Testbed Department of Civil Engineering University of Toronto 35 St. George St. Toronto ON M5S 1A4 **Tel.:** 416-946-5036 **Fax:** 416-978-5054

INSTITUTION / CENTRE / DEPARTMENT	DESCRIPTION OF RESEARCH PROGRAMME	AREAS OF EXPERTISE	CONTACT INFORMATION
			Email: baher.abdulhai@utoronto.ca
University of Waterloo **Centre for Pavement & Transportation Technology (CPATT)**	**(CPATT)** Research work focuses on the advancement and optimization of conventional pavement technology, at times utilizing technologies from other disciplines, e.g. the deployment of advanced wireless technologies for automatic field data collection and generation of pavement performance databases for pavement engineering modelling and management. **NB:** Much of the research focuses on issues relevant to Canada, such as the effects of low-temperatures on pavement, concrete durability, and use of polymer and recycled rubber for upgrading pavement performance. **Web: http://www.civil.uwaterloo.ca/CPATT/**	Pavement engineering and technology.	Dr. Carl T. Haas Director Centre for Pavement and Transportation Technology (CPATT) University of Waterloo Department of Civil Engineering Engineering 2 (E2) 2346C 200 University Avenue West Waterloo ON N2L 3G1 **Tel.:** 519-888-4567 ext. 35492 **Fax:** 519-888-4300 **Email chaas@civmail.uwaterloo.ca**
University of Waterloo **Department of Civil Engineering Transportation Systems Research Group**	The **Transportation Systems Research Group** is made up of the following faculty members as of Winter 2007: • Liping (Lee) Fu: Public transportation systems, ITS, vehicle routing/scheduling, intelligent paratransit, GIS applications • Bruce Hellinga: Traffic engineering, ITS, traffic simulation • Frank Saccomanno: Traffic safety • Susan Tighe: Pavement, asset management • Jeff Casello: Urban transportation, multi-modal travel forecasting models • Carl T. Haas: Infrastructure management and construction, sensing, sustainability, ITS **Web: http://www.civil.uwaterloo.ca/transportation/**	Planning, design, operation and management of transportation systems, including traffic engineering, ITS, urban transportation, road safety, infrastructure management.	Dr. Liping Fu University of Waterloo Department of Civil Engineering Room E2-2305 200 University Avenue West Waterloo ON N2L 3G1 **Tel.:** 519-888-4567 ext. 33984 **Fax:** 519-888-4349 **Email lfu@civmail.uwaterloo.ca** **Additional contacts under "people" at:** **http://www.civil.uwaterloo.ca/transportation/**
University of Waterloo **Waterloo Centre for Automotive Research (WatCAR)**	The **WatCAR** strives to promote world-class research in support of the automotive sector as well as act as a common interface for strategic interaction with OEMs and Tier 1 automotive vendors. Waterloo researchers are deeply partnered with **Auto21**. **NB:** Like **ITL CSC**, and **IP, WatCAR** is based on a cooperative model of technology innovation. It's website contains an extensive list of industry and governmental partners - which does not include TC.	Automotive materials and manufacturing, mechatronics, alternative fuels and fuel cells, clean air technologies, ergonomics and human factors, automotive design.	John McPhee Executive Director **Email:** mcphee@real.uwaterloo.ca Dr. Michael J. Worswick Research & External Partnerships University of Waterloo Department of Mechanical Engineering Room E2-2325 200 University Avenue West Waterloo ON N2L 3G1

INSTITUTION / CENTRE / DEPARTMENT	DESCRIPTION OF RESEARCH PROGRAMME	AREAS OF EXPERTISE	CONTACT INFORMATION
	Web: http://watcar.uwaterloo.ca/		**Tel.:** 519-888-4567 ext. 35830 **Fax:** 519-888-5862 **Email**: worswick@lagavulin.uwaterloo.ca
University of Waterloo **School of Planning**	Dr. Clarence Woudsma is conducting as research rpoject under the auspices of NRCAN entitled **Climate change and Canadian road transport: assessing impacts and adaptations.** **Web:** http://adaptation.nrcan.gc.ca/projdb/index_e.php?class=121 Importantly for TC and TTI, his research also includes: **'understanding the role of innovation in transportation gateways'**. **Web:** http://www.fes.uwaterloo.ca/planning/faculty/woudsma.html	Innovation in transportation, gateways, climate change impacts on transport.	Clarence Woudsma **School Director, Associate Professor** School of Planning University of Waterloo Waterloo, ON N2L 3G1 **Tel**: (519) 888-4567 ext. 33662 **Email: cwoudsma@uwaterloo.ca**
University of Windsor **Auto21**	**AUTO21** is a national research initiative supported by the Government of Canada through the Networks of Centres of Excellence Directorate and more than 110 industry, government and institutional partners. AUTO21 was formed to focus Canadian research expertise on the task of improving and enhancing the global competitiveness of the Canadian automotive industry. The Network currently supports over 230 researchers working at more than 38 academic institutions, government research facilities and private sector research labs across Canada and around the world. **Web: http://www.auto21.ca/**	Vehicle safety and accident prevention; driver behaviour; automotive industry; powertrain fuels and emissions; intelligent systems and sensors; automotive materials and manufacturing; automotive design.	Dr. Peter Frise Scientific Director & CEO AUTO 21 University of Windsor 401 Sunset Ave WINDSOR ON N9B 3P4 **Tel**.: 519-253-3000 ext. 3888 **Fax:** 519-971-3626 **E-mail**: **peter.frise@auto21.ca**
University of Windsor & DaimlerChrysler **Automotive Research and Development Center**	The **Automotive Research and Development Centre (ARDC)** is a joint undertaking between DaimlerChrysler Canada and the University of Windsor. **Web:** **http://athena.uwindsor.ca/units/eng/news.nsf/0/474F9FFD7E425CCA85256CD00049CC0D?openDocument** **DaimlerChrysler's Industrial Research chair** **Web:** **http://www.uwindsor.ca/units/eng-auto/daimlerchrysler/DaimlerC.nsf**	Vehicle durability, alternative fuels, emissions and fuel economy, automotive lighting, engineering design, automotive recycling, automotive coatings, automotive corrosion, vehicle safety.	Dr. Peter Frise Industrial Research Chair in Mechanical Design University of Windsor 401 Sunset Ave WINDSOR ON N9B 3P4 **Tel**.: 519-253-3000 ext. 3888 **Fax:** 519-971-3626 **E-mail**: **pfrise@uwindsor.ca**

INSTITUTION / CENTRE / DEPARTMENT	DESCRIPTION OF RESEARCH PROGRAMME	AREAS OF EXPERTISE	CONTACT INFORMATION
QUEBEC			
Concordia University **Concordia Centre for Advanced Vehicle Engineering Research Centre (CONCAVE)**	**CONCAVE** was founded in 1985 to focus research and development efforts in the area of transport technology. It aims to develop safe and efficient transport systems through fundamental and applied research; and to develop cost effective analysis, design and testing of vehicle systems and sub-systems. **Web:** **http://concave.concordia.ca/**	CONCAVE's website provides a **detailed list of publications and research activities** including: Road vehicle dynamics, railway dynamics, micro-sensors and devices, micro-mechatronics, driver-vehicle interaction, structural dynamics, acoustics, vibration control, human vibration, adaptive and active control, suspension dynamics.	Dr. Ion Stiharu Director CONCAVE Research Centre, CR-200 Concordia University 1455 de Maisonneuve Blvd West Montréal, Québec H3G 1M8 **Tel**.: 514- 848-7930 **Fax**: (514) 848-8635 **Email**: **istih@vax2.concordia.ca**
Concordia University Dept of Building, Civil and Environmental Engineering. **Transportation Engineering Laboratory**	Research at the **Transportation Engineering Laboratory** focuses on transportation engineering and design. **Web:** **http://www.bcee.concordia.ca/index.php/Transportation_Engineering**	Traffic operations and control, traffic simulation, intelligent transportation systems, artificial intelligence applications.	Ciprian Alecsandru Dept of Building, Civil & Environmental Engineering Concordia University Room EV-6.139 1455 de Maisonneuve Blvd. W Montreal QC H3G 1M8 **Tel**.: 514-848-2424 Ext. 8769 or 7812 **Fax**:: 514-848-7965 **Email**: **ciprian@bcee.concordia.ca**
École Polytechnique de Montréal **Groupe MADITUC**	The **Groupe MADITUC** is the transportation section of the Civil Engineering Department of the École Polytechnique. The group is involved in numerous technical projects in Greater Montreal Region- **Ministère des Transports du Québec** for transportation infrastructure planning, **Communauté Urbaine de Montréal** planning service for urban goods transportation, **Montreal Urban Transit Commission** for transit planning, O-D survey data analyzing and corporate information system. The group also has other important partners: the Toronto Transit Commission (TTC), the Winnipêg Transit Departement (WTD), the Montreal South Shore Transit Commission, the City of Laval Transit Commission and the Quebec Urban Transit Commission.	Transit network simulations and transportation planning, operations research, transportation information system	Dr. Robert Chapleau Director Groupe MADITUC Département des génies civil, géologique et des mines, section transports École Polytechnique de Montréal Campus de l'Université de Montréal, local B-324.0 Casier postal 6079, succursale Centre-Ville 2900, boul. Édouard-Montpetit Montréal QC H3C 3A7 **Tel.:** 514-340-4711 # 4809 **Fax:** 514-340-5763 **Email:** **rchapleau@mail.polymtl.ca**

INSTITUTION / CENTRE / DEPARTMENT	DESCRIPTION OF RESEARCH PROGRAMME	AREAS OF EXPERTISE	CONTACT INFORMATION
	Web: http://www.transport.polymtl.ca/e_mad.htm		
Université de Sherbrooke **Coopératif de recherche en sécurité routière / Road Safety Research Cooperative (CORSUS)**	Le **(CORSUS)** is an interdisciplinary group formed by researchers from the University's Departments of Applied Geomatics, Civil Engineering, and Psychology. **Web**: **http://www.usherbrooke.ca/geotel/recherche/transport.html**	Road safety.	Dr. Marcel Pouliot Professeur titulaire Département de géomatique appliquée Coopératif de recherche en sécurité routière, CORSUS Faculté des lettres et sciences humaines Université de Sherbrooke Sherbrooke QC J1K 2R1 **Tel.:** 819-821- 8000 poste 62195 **Fax:** 819-821-7944 **E-mail:** **Marcel Pouliot@USherbrooke.ca**
Université Laval **Groupe de recherche intedisciplinaire mobilité, environnement, sécurité / Interdisciplinary Research Group on Mobility, Environment and Safety (GRIMES)**	**GRIMES** is a network offering researchers from various departments affiliated with research centers and labs the opportunity to work together on research assessing the impact of vehicle use on energy efficiency, the environment, and safety. It is partnered with Natural Resources Canada, Transport Canada, Société de l'assurance automobile du Québec, Ministère des Transports du Québec, SSHRC, and NSERC and therefore provides a good model for multi-tiered partnerships. **Web**: **http://www.grimes.ulaval.ca**	Road safety, transportation energy issues and environmental impacts.	Dr. Martin Lee-Gosselin Head Groupe de recherche intedisciplinaire mobilité, environnement, sécurité (GRIMES) Université Laval Pavillon Félix-Antoine-Savard, local 1626 Quebec QC G1K 7P4 **Tel.:** 418-656-2131 poste 2578 **Fax:** 418-656-2018 **E-mail:** **Martin.Lee-Gosselin@CRAD.ulaval.ca**
NEW BRUNSWICK			
University of New Brunswick Department of Civil Engineering **D.C. Campbell Chair in Highway Research and Pavement Design**	**D.C. Campbell Chair in Highway Research and Pavement Design** The primary mission of the Chair is to develop and sustain a long-term active link between the highway construction and pavement research industry and the academia, and to develop a sustainable capability for addressing the various problems facing industry. Research on pavement has focused on road roughness and	Pavement technology and highway engineering; rural and low-density intelligent transportation systems	Dr. Donath Mramira University of New Brunswick Department of Civil Engineering Head Hall, Room H-124 17 Dineen Drive Fredericton NB E3B 5A3 **Tel.:** 506-453-4976 **Fax:** 506-453-3568

INSTITUTION / CENTRE / DEPARTMENT	DESCRIPTION OF RESEARCH PROGRAMME	AREAS OF EXPERTISE	CONTACT INFORMATION
	pavement evaluation technologies, pavement performance modeling, life cycle costing and appraisal systems, computer aided pavement design, and infrastructure management. The Chair is open to involvement in other areas of pavement, highway and transportation engineering. **Web:** http://www.unb.ca/web/civil/dccchair/index.html		**E-mail:** donath@unb.ca
University of New Brunswick Department of Civil Engineering **Transportation Group**	**UNB Transportation Group** is a multi-disciplinary group composed of faculty from both the engineering and economic departments, Emeritus Honorees, researchers, research assistants and graduate students. The Group carries out research in response to regional and national agency and government requirements. Areas of interest include transportation policy, economic analysis, intelligent transportation systems, road safety and rail transportation. **Web:** http://www.unb.ca/transpo	Road safety, transportation policy and economics.	Dr. Eric D. Hildebrand Coordinator UNB Transportation Group Department of Civil Engineering University of New Brunswick PO Box 4400 Fredericton NB E3B 5A3 **Tel.:** 506-453-5113 **Fax:** 506-453-3568 **E-mail:** edh@unb.ca
NOVA SCOTIA			
Dalhousie University **Institute for Research in Materials**	The **Institute for Research in Materials** is made up of about 100 faculty members, in 6 faculties and 18 departments. Research topics range from nanomaterials to macroscopic structures and include experimental and theoretical approaches. **Web:** http://www.irm.dal.ca/index.php	Comoposites, concrete, fibre optics, highway materials, polymers, corrosion/degradation, failure/fatigue/fracture, wear, freezing and thawing resistance, calorimetry, mechanical testing, microscopy, modelling, non-destructive testing, thermal analysis, X-ray diffraction, and ground penetrating radar.	Dr. Jean-François Trottier Director CAD CAM Centre (Intelligent Structures and Innovative Materials Group) Department of Civil Engineering Building B – Sexton Campus, Room B233 Dalhousie University P.O. Box 1000 Halifax NS B3J 2X4 **Tel.:** 902-494-3990 **Fax:** 902-422-8380 **Email:** jean-francois.trottier@dal.ca

NEWFOUNDLAND			
Memorial University of Newfoundland **Storm and wind impacts and transportation: southwest Newfoundland**	This was an individual research project conducted through a grant from NRCAN. The full report of the research project is available at **http://adaptation.nrcan.gc.ca/projdb/index_e.php?class=121**	Transport in extreme weather conditions.	Norm Catto **Head Researcher** Memorial University of Newfoundland **Tel:**(709) 737-8413 **Email:**ncatto@mun.ca

ITS RESEARCH AND DEVELOPMENT IN CANADA – A summary of projects planned or in progress for 2008-2009

Information included below was submitted to ITS Canada in the fall of 2008, in response to our queries. Some of the projects below may duplicate those described above.

CARLETON UNIVERSITY
Faculty of Engineering and Design, Department of Civil & Environmental Engineering, Transportation Program

ITS Focus
- Urban, intercity, trans-border, and rural
- Road traffic and public transportation
- Safety, mobility, efficiency, energy and environment.

Current and Recent ITS-Related Projects
Optimizing the efficiency and equity of traffic flow: development of an integrated traffic control strategy for freeway-arterial corridors (in progress)

- Adaptive management of multimodal traffic network under saturated and over-saturated conditions (in progress)
- Risk analysis of ITS investments (in progress)
- Bayesian artificial intelligence-based collision avoidance system (completed)
- Border crossing delay prediction system (completed)
- Priority crossing programs at land border crossings (completed)
- Emergency vehicle prioritization (completed)
- Bus arrival prediction system based on statistical pattern recognition (completed)
- Advanced traffic and traveller information system (completed)
- Control of HOT lanes (completed)
- Smart work zones (completed).

Current Researchers
Ata Khan, Jennifer Armstrong, Kornel Mucsi

Project Partners/Funding Agencies
- Natural Sciences and Engineering Research Council (NSERC)
- Ministry of Transportation, Ontario (MTO)
- AUTO21 Network of Centres of Excellence

ITS-Related Course Offerings
- Directed Studies on Advanced ITS
- ITS Coverage in Traffic Engineering (graduate course)
- ITS Coverage in Urban Transportation (graduate course)

Contact Information
Professor Ata M. Khan

Telephone: (613) 520 2600, Ext. 5786
Email: **ata_khan@carleton.ca**

UNIVERSITY OF CALGARY
Department of Civil Engineering, Transportation Engineering Program

ITS Focus
- Urban Traffic Control and Management
- ITS and Safety
- Advanced Public Transportation Systems
- Vehicle Infrastructure Integration (prospective).

Current ITS-Related Projects
- Traffic-responsive signals
- Aadaptive ramp metering
- Real-time bus location
- Passenger information and scheduling for public transportation in Calgary

Current Researchers
Lina Kattan, Richard Tay, Fred Hall, Chan Wirasinghe, Ahmad Radmanesh (Adjunct Professor)

Project Partners
- City of Calgary
- Alberta Transportation

ITS-Related Course Offerings
Fundamentals of ITS & Transportation System Performance

Contact Information
Lina Kattan, Ph.D, P.Eng.
Telephone: (403) 220-3010
Email: **lkattan@ucalgary.ca**

UNIVERSITY OF BRITISH COLUMBIA
Faculty of Applied Science, Department of Electrical and Computer Engineering

ITS Focus
- Vehicle-to-vehicle communications
- Vehicle-to-roadside communications
- Vehicle-infrastructure integration

ITS-Related Projects
- Vehicular Telematics over WiFi and WiMax Multihop Networks (current, funded by AUTO21 NCE)
- Reliable and trusted networking for data-centric wireless access with applications to vehicular telematics (current, funded by BC-China ICSD program).

Researchers
Victor Leung (Principal Investigator), Vincent Wong, Garland Chow (University of British Columbia's Sauder School of Business), Oliver Yang (University of Ottawa), Jelena Misic (University of Manitoba), Ekram Hossain (University of Manitoba), Bob McLeod (University of Manitoba), Sathish Gopalakrishnan, Matei Ripeanu, Vincent Wong

Project Partners
- Transport Canada ITS Office
- Nokia
- Telus
- Communications Research Centre
- TRLabs
- Novax Industries
- Methusala Microcells Inc.
- Vansco Electronics
- University of British Columbia's Bureau of Intelligent Transportation Systems and Freight Security
- Jilin University, China.

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UNIVERSITY OF NEW BRUNSWICK
Faculty of Engineering, Department of Civil Engineering – Transportation Group

ITS Focus
- Rural ITS
- Rail safety
- Highway safety
- Wireless

ITS-Related Projects

UNB-led Research
Conducted under the Canada-New Brunswick Contribution Agreement for Rural ITS Research (except for (*), funded by Transport Canada)
- Using a radar display to manage vehicle speeds in highway work zones (completed)
- Testing a cost-effective electronic device to identify railway track switch position from a train (completed)
- A low-cost alternative to railway level crossing warning systems for high consequence traffic unprotected level crossings (completed)
- Review of remote emissions sensing technology (completed)

- Research platform for spring weight restriction technology (completed)
- Applicability of Vehicle Infrastructure Cooperation to Low-Density and Rural Rail Grade Crossing Safety(*) (completed)
- Intelligence Gathering and Requirements Development for the Establishment of a Vehicle-Infrastructure-Cooperation Testbed for Rural and Low-Density Transportation Applications at the University of New Brunswick (*) (in progress)

NB DOT-led Research

- Developing a plan to coordinate the deployment of ITS technology to help Commercial Vehicle Operations (CVO) efficiency in the province (completed)

- New Brunswick traveller information needs assessment (completed)
- Collecting and analysing pavement condition information using digital video and Geographic Information Systems (GIS) (completed)
- Phase 2: New Brunswick traveller information needs assessment (completed)
- In-Vehicle Technology Assessment (Winter Road Conditions) (completed).

Researchers

Dr. Eric Hildebrand, Trevor Hanson, Dr. Eldo Hildebrand, Dr. Ming Zhong

Project Partners

- Transport Canada
- New Brunswick Department of Transportation
- NB Southern Railway
- Maritime Road Development Corporation
- Global Rail Systems
- Ontrack Systems

ITS-Related Course Offerings

- Intelligent Transportation Systems
- Road Safety Engineering
- Geographic Information Systems
- Traffic Engineering

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