

2015



CBI QUARTERLY

December 2015 Edition

Welcome to the CBI Quarterly!



by Dr. Bill Anderson

Welcome to the first issue of the CBI Quarterly Newsletter.

The launch of this newsletter marks another exciting milestone for CBI. The newsletter will serve as a communication tool, enhancing how we communicate with stake holders, industry professionals, students, and all those in between.

The timing couldn't be better. Just recently we launched our new website, and social media channels, altering the mix, and how we communicate with you.

Another impressive achievement of CBI has been the Certificate Program in Border Management and International Trade. Bridging traditional disciplines and creating a distinctive learning environment that aims to address the emerging trends in international trade.

We recently celebrated graduates of the 4 course certificate program. Many, if not all, have returned to complete the 8 course FITT Certification (Forum for International Trade Training)

and University Diploma. I look forward to celebrating with them yet another achievement, very soon.

Research is the foundation of everything we do at CBI. Our Traffic Lab, research in areas of policy, economic analysis, or work we support in security technology. It is all cutting edge. In this issue, you will read about Dr. Sazzadur Choudhury and his research on Small Radar Devices for Security and other Applications. Dr. Choudhury brings a wealth of knowledge and experience to CBI, and we are happy he is part of our team.

As we move forward in the New Year, there is a lot to look forward to. In early 2016, CBI will host a conference in Toronto, discussing border matters such as security, trade relations, and other exciting issues. Also, on a more local level, we will be hosting round table discussions. We've called it "Let's Get Ready for Gordie". As you read through the newsletter, you'll see an op-ed piece written by myself and Laurie Tannous, CEO of IBLs, our sister organization.

Speaking of IBLs (Institute for Border Logistics and Security), their new website has launched. You can visit bordersecurityinstitute.com. Even more exciting is the construction of the new IBLs Headquarters adjacent to the Windsor International Airport.

I look forward to engaging with you again in March, thanks for stopping in!

A little about Dr. Bill Anderson

Dr. William (Bill) P. Anderson received his doctorate in Geography from Boston University in 1984. From 1983 to 1998 he was a member of the Geography faculty, director of the Institute for Energy Studies and an associate member of the Department of Civil engineering at McMaster University. From 1998 to 2008 he was a professor in the Department of Geography and a lead researcher in the Center for Transportation Studies at Boston University.

He arrived July 1, 2008 as Ontario Research Chair in Cross-Border Transportation Policy, founding director of the Cross-Border Transportation Studies Institute and professor in the Department of Political Science at the University of Windsor.

Professor Anderson's main research interests are in transportation studies; international trade and business; Canada-US economic integration; supply chain analysis; and urban and regional economic analysis.

He has published 60 journal articles and book chapters and is the author and co-author of five recent books on economic geography, transportation infrastructure and technologies.

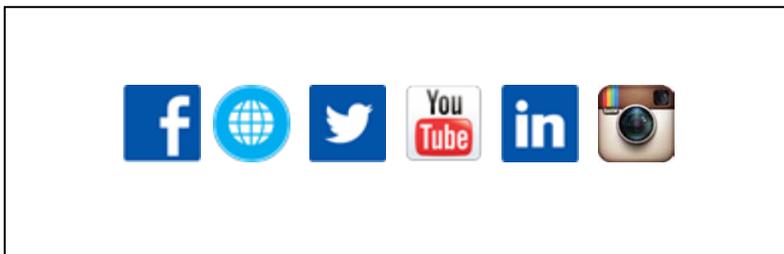
We're Social!

CBI is proud to say that in October 2015, we launched our new website. Users can now visit the site and get up to date information on the great things happening at the Cross-Border Institute.

The user friendly site gives you access to our research and analysis, photo gallery, videos, education portal, news, and information on the people working behind the scenes.

Not only that, our site is linked to the popular social media streams, Instagram, Facebook, Twitter, LinkedIn, and YouTube. We did this to make the experience all the more better. You can now access CBIs accounts from your mobiles and desktop computers to stay in touch and up to date about everything at CBI.

Don't hesitate, check us out now!



*“We believe the best is yet to come –
but only if we make it come.”*

Bill Anderson, CBI Laurie Tannous, IBLS

Let's Get Ready for Gordie

Coming early 2016!



Brought to you by the Cross-Border Institute at the University of Windsor and
the Institute for Border Logistics and Security



Don't sit back and let new crossing become a 'Windsor bypass'

Bill Anderson and Laurie Tannous

Windsor Star Published on: December 11, 2015 | Last Updated: December 11, 2015 11:36 AM EST

Driving the full length of the recently opened Herb Gray Parkway, Windsor-Essex residents discovered that infrastructure dreams really do come true. Another dream that is looking more and more like reality is the Gordie Howe International Bridge, the long sought for second Detroit River crossing. When it opens in 2020, it will connect with the Herb Gray Parkway to provide the link that has been needed for decades at Canada's most important border crossing.

These two interrelated megaprojects have been a boon to the Windsor-Essex economy. Coming at a time when the region needed an economic stimulus, they keep construction workers on the job, port facilities humming, and a host of local firms enjoying the spin-off effects. Our high unemployment rate would only be worse were it not for the Parkway. The Bridge project will provide a similar employment boost when full-scale construction begins early in 2017.

New infrastructure, coupled with reforms under the Canada-US *Beyond the Border* initiative, will transform the Detroit River crossing. In another five years, it will be possible to complete the trip from the 401 to the I-75 and beyond without a single stop light. (With a quick passage, we hope, through the world's most advanced border inspection facility.) But as construction activity winds down, the natural question is "what's next."

We believe the best is yet to come - but only if we make it come. We cannot assume that once it is built they will come, we need to take steps now to realize the full potential of this significant project. Transportation infrastructure projects on this scale alter the economic geography of a place; they are the building blocks that spur economic growth. In effect, they bring the region closer to markets and opportunities, expanding it's economic potential and enhancing it's competitive position. For example, with the completion of both projects, properties along the 401 as far out as Manning Road will effectively be *on* the border, providing attractive sites for industries engaged in Canada-US trade. More broadly, a better Detroit River crossing reinforces the position of Southwest Ontario and Southeast Michigan as the bi-national pivot of the Great Lakes Region.

New transportation infrastructure cannot make economic development happen. It can only make it possible. Development happens when people take hold of the possibilities and create new enterprises. In the complex process of economic development, a variety of actors have to work together. Entrepreneurs, investors, planners, public servants and many more all have their roles to play. Global construction firms built the Parkway and will build the Bridge, but it will take the entire Windsor-Essex community to transform those projects into a lasting economic legacy.

So let's get started. The process must begin with a lot of serious analysis. What are the economic activities that can best take advantage of the enhanced accessibility to the US market? What types of sites do they need? What utilities, amenities and above all what workforce skills do they need? Finding answers to these questions will take more than brainstorming. It will take a process of data analysis and consultation with a variety of experts, the business community and the general public. The Cross-Border Institute has already started the data crunching, but input from the whole community is needed. It will be hard work, and many people will have to offer their time for the benefit of their community.

Once the most likely opportunities are identified, it will be necessary to spot the gaps between their requirements and our regional resources- and then work to fill them. Where additional infrastructure is needed we can call on a new Federal Government that is committed to advancing the economy by building infrastructure and by working cooperatively with the Government of Ontario. Where zoning changes, permits and new bylaws are needed; we hope to have the support of City Councils in Windsor and all of our regional municipalities. Where new workforce skills are needed St Clair College, the University of Windsor and various educational institutions can work together to fill this gap

We have heard that in Toronto some people refer to our Parkway / Bridge project as “the Windsor bypass.” If that characterization turns out to be correct, we will have missed an historic opportunity, the likes of which will never come again. To miss this opportunity would be to risk significant collateral damage to our region.

Early in 2016, the Institute for Border Logistics and Security and the University of Windsor’s Cross-Border Institute will be kicking off a series of stakeholder engagement meetings and workshops to get the ball rolling. We hope to involve all local governments, agencies, civic groups and individuals.

Bill Anderson is the Ontario Research Chair in Cross-Border Transportation Policy and Director of the Cross-Border Institute (CBI). Laurie Tannous is CEO of the Institute for Border Logistics and Security (IBLS).



**CROSS-BORDER
INSTITUTE**



**University
of Windsor**

**COMING
EARLY 2016
TORONTO**

**BUILDING A BETTER
BORDER**

Geographic, historic, diplomatic and economic forces have combined to create a uniquely integrated bi-national region spanning The Central Canadian Provinces and the Great Lakes States. The friction of the border that bisects the region diminishes its global competitiveness by curbing beneficial trade and the interchange of skills, information and investment dollars. This conference addresses how infrastructure, policy, technology and education can overcome border frictions to achieve the full potential of the binational Great Lakes St Lawrence economic region.

CBI Research

A major pillar of the CBI is the Traffic Lab, which is led by CBI Associate Director Dr. Hanna Maoh. The Traffic Lab maintains sophisticated software, data and hardware including sensing resources to conduct cutting edge research. As a world class research facility, the lab's overarching goal is to generate information that can lead to improved traffic performance at Canada-US border crossings.



In recent weeks, CBI has had the pleasure of meeting and presenting some of its research and development to agencies such as the Canadian Border Security Agency, Windsor-Detroit Bridge Authority and the Stevens Institute of Technology. The ultimate goal of all research a CBI is to make the border work better. This means listening carefully to public and private sector border stakeholders and translating the results of our research into better government policy and better private sector practice. CBI Executive Director Marta Leardi-Anderson leads our efforts to consult and coordinate with key government agencies and with firms and institutions in border-sensitive sectors such as manufacturing, agri-food and health care.

Currently there are over 20 ongoing and completed research projects, and over 30 researchers working hard to bring state-of-the-art research to us. Some examples are Biometric Screening, Concealed Weapon Detection, Vehicle ID Border Surveillance, and Vehicle to Vehicle Communications. The full list can be found on our website at www.cbainstitute.ca/ongoing-and-completed-projects/.

To bring you more detail on his research, this issues featured researchers are Dr. Sazzadur Choudhury, who will explain his research on Small Radar Devices for Security and other Applications.



Featured Researchers

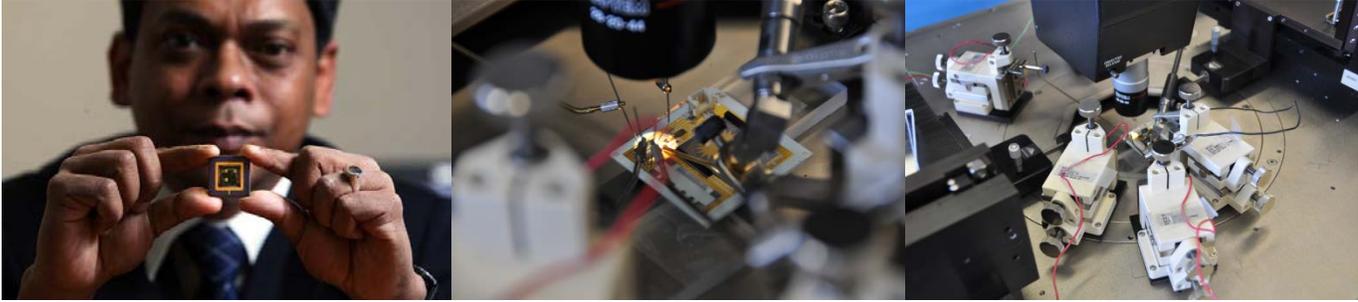


Photo courtesy of WindsorStar

Dr. Sazzadur Chowdhury - Microsystems for a Safer and Healthier Canada

Dr. Sazzadur Chowdhury, an associate professor in the department of electrical and computer engineering, is leading a team of researchers in the University of Windsor to develop microsystems that can provide advanced security, automotive safety, and advanced health care.

The core of the microsystems is a disruptive new technology called Micro Electromechanical systems (MEMS) that enables to fabricate three-dimensional planar or non-planar microstructures using processes similar to conventional VLSI technology. The resulting microdevices have feature sizes in the range of 10-100 micrometers and merge the functions of computing and communicating together with the capability to sense, actuate and control. The MEMS technology links different science domains such as acoustics, mechanics, electromagnetics, fluidics, photonics, biology, materials, and quantum mechanics to realize completely new devices and applications that are quite impossible using conventional technology. The resulting microdevices offer far more superior functionalities, performance, and reliability at a lower cost in a much smaller form factor.

The MEMS Lab is located in the new Centre for Engineering innovation (CEI) in a class 10,000 cleanroom. The lab is equipped with world class microfabrication equipment that enables to process micro and nano scale thin film structures to create advanced micro devices. Industry standard professional software suites are being used to design and simulate the microdevices and measure their performances.

A major research focus of the lab is to develop high performance compact millimeter wave solid state radars for use in security and surveillance applications for borders, maritime boundaries, airports, perimeter surveillance of important installations and infrastructures. The current version of the radar is 35 mm x 35 mm and 5 mm that makes it one of the smallest and thinnest radar in the world. The radar has been realized using a state-of-the-art low temperature co-fired ceramic (LTCC) technology that incorporates a highly sophisticated transceiver chip, MEMS based silicon Rotman lens, micro switches, and a microfabricated antenna array. The development of another version of the radar is in progress that increases the level of integration further by fabricating a beamforming Butler matrix and slot-fed antenna array as an integral part of the LTCC solid-state package. The initial tests of the new radar demonstrated successful transmission and reception.

Research is going on to utilize the core radar technology also for vehicle collision avoidance applications and for bio-medical applications, such as non-contact vital sign and cardiac activity monitoring.

It is expected that the on-going research in the MEMS lab would contribute to sustainable economic development of Ontario and Canada through advanced microsystems manufacturing while improving the quality of lives through higher levels of security, advanced health care, and safer cars.

Certificate Program in Border Management and International Trade

The Certificate Program in Border Management and International Trade includes eight courses: each course can be taken individually as a standalone course, part of an individual's professional development or personal interest.

The foundation of the Certificate Program is a community-based focus, bridging traditional disciplines and creating a distinctive learning environment that aims to address the emerging trends in international trade while simultaneously focusing on multiple stakeholders: academia, government and industry.



*David Offenbacher- Senior Account Manager
Export Development Canada*



Doug Matton-VP. International of Centerline Ltd.



*Peter Kucherepa -Policy Advisor Foreign Affairs
Trade Development Canada*

Students receive dual certification, one from the University of Windsor/CBI and one from the Forum for International Trade Training (FITT). Any four successfully completed courses lead to a Cross-Border Management Level I Certificate and a FITT Certificate, while all eight courses lead to a Cross-Border Management Level II Certificate and a FITT Diploma.



Recognizing the importance of flexibility in learning for today's student body, the program will be available in an online and blended format, starting September 2015, to complement the face-to-face delivery. Professionals or students interested can get more information on our website at <http://cbinstitute.ca/university-of-windsor-certificate-program/>.

Register Now!

University Certificate Program in Border Management and International Trade



- Are you looking to upgrade your professional credentials?
- Are you engaged or planning to engage in cross-border business?
- Would you like to obtain a professional credential in the field of international business?
- Does your organization require of its employees to regularly upgrade and train its employees in the field of international trade and border management?

If you answered yes to any of the questions above then the Border Management and International program is for you!

The Cross-Border Institute offers a fully accredited program, at the University of Windsor, in partnership with the Forum for International Trade Training (FITT), leading to the professional designation of Certified International Trade Professional (CITP).

FOR MORE INFORMATION VISIT WWW.CBINSTITUTE.CA





Happy Holidays

From your friends at



On behalf of all of our staff at the Cross-Border Institute, I would like to wish you and your families,

Best Wishes for a Joyous Holiday Season and a Very Happy New Year!

A handwritten signature in black ink, appearing to read 'Bill Anderson', is centered on a white rectangular background.

Dr. Bill Anderson

Ontario Research Chair in Cross-Border Transportation Policy
Director, Cross-Border Institute
University of Windsor



About Us!



The Cross-Border Institute (CBI) at the University of Windsor was founded in 2008 under the direction of Dr. Bill Anderson, Ontario Research Chair in Cross-Border Transportation Policy. It is dedicated to research, education and public outreach related to the movement of people, goods and services across the Canada-US border. It takes a multi-disciplinary perspective, incorporating engineering, economics, the social sciences, management and law.

CBI's location steps away from the Windsor- Detroit border – the largest point of crossing for the huge Canada-US trade relationship – provides a unique perspective from which to study the impact of trends in cross-border transportation, trade, technology, and policy decisions by governments on both sides of the border.

Working with public and private sector stakeholders, CBI has developed expertise in cross-border business and border management, both critical to Canada's economic future. It is a leading centre for research on cross-border supply chains and transportation. Its research, education and outreach activities are funded by a number of federal and provincial agencies, most notably FedDev Ontario. www.cbainstitute.ca



CBI works in cooperation with the Institute for Border Logistics and Security (IBLS) in a unique joint effort by the City of Windsor and the University of Windsor to advance the Windsor- Essex region as a world leader in cross-border logistics and security. Laurie Tannous is the CEO of the Institute for Border Logistics which is based at the Windsor International Airport. www.bordersecurityinstitute.com

Our next issue comes out in March 2016. Watch for it!



Federal Economic Development
Agency for Southern Ontario

Agence fédérale de développement
économique pour le Sud de l'Ontario

Canada