# CIRPA NEWS

CIRPA /ACPRI
Canadian Institutional Research and Planning Association
Association canadienne de planification et de recherche institutionnelles

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## President's Message

**Cameron Tilson,**
**CIRPA President**

Welcome to the 2010 Conference edition of the CIRPA newsletter. By now, I trust you have settled into a routine after the frantic first few weeks of the academic year. Our offices are always at the centre of a multitude of demands, but we all know that it seems to be magnified in September. Once again, most of our campuses are reporting record-levels of enrolment, which in part underlies a lot of the demand for our services. The growth trend will continue for the next few years, so I guess we just have to grin and bear it. Perhaps that is one reason why we all like to come to the CIRPA conference in late October for a bit of a breather (hint: leave your Blackberrys and i-Phones at home!).

Meanwhile, we are very excited to be in the final stages of preparations for our 19th Annual Conference in the nation's capital – it's hard to believe we are almost there. Co-chairs Caroline Lachance and Tony Eder, along with all the folks on the conference committees, have been hard at work preparing for your arrival and it promises to be another great conference. We are anticipating a good turnout, despite travel restrictions in this era of financial constraint faced by many of our institutions.

As you are aware, 2010 has been a very busy year for the Board. Primarily, we are very pleased to be presenting a new Strategic Plan for the association, having met the ambitious timeline we set for ourselves. A final draft was circulated in early October for your perusal and commentary. Our intention is to present a final document for approval at the Annual General Meeting in Ottawa. There will be at least one other "surprise" at the AGM, so I urge you to attend (refreshments will be served, given the early hour).

Of course, the business "stuff" is only a small part of the annual conference. We attend conferences primarily to learn about the work of our colleagues and/or present the results of our own labours. Scanning through the program, I noted some of the following broad topics: why sharing of best practices is so important; the opportunities for utilizing new technological tools or methods; the results of a recent analysis of data from a major Canada-wide survey; the results of using appreciative inquiry for strategic planning, and much, much more. There are so many outstanding sessions, no doubt it will be a challenge making selections!

It is also notable that for the second time, we are very pleased to be partnering with the Society for College and University Planning (SCUP) in offering Step 1 of their highly-acclaimed Planning Institute. In the future, we plan to significantly increase the number of collaborative offerings from other professional associations – establishment of these partnerships brings even more value to your CIRPA membership.

> **"I cannot over-emphasize the importance of sharing our research with each other"**

In conclusion, I cannot over-emphasize the importance of sharing our research with each other, both through sessions and casual collaboration at the annual conference. But it doesn't stop there: we can also do this throughout the year through the newsletter and listserv. If you have never presented at the conference or submitted an article or posed a question to the listserv, I urge you to do so - we all benefit from shared knowledge.

This is the true value of belonging to CIRPA and attending the conference look forward to meeting you in Ottawa! ■

# Featured Pre-Conference Workshop: Society for College and University Planning

Foundations of Planning in Higher Education

**"Integrated Planning"**

You've heard about it - but do you know how to implement it on your campus?
Here's a quick look from Step I in Minneapolis.

Step I of the three-step SCUP Planning Institute will help you and your team build an integrated planning process that addresses the complexities of meeting multiple stakeholders' needs.
You will, as a participant, gain an understanding of the following:

- Basic elements of planning
- Practice of integrated planning
- Social and political context of integrated planning
- Value of evidence-based planning

View the full agenda and detailed description (PDF). Build a network of planners across the various disciplines - register today! ■

# Featured Pre-Conference Workshop: Introduction to IR for Newcomers

**Anna Burke**
Manager of Institutional Research & Analysis
Nova Scotia Community College
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The IR profession has welcomed many new faces in the past several years. The depth and breadth of our roles as IR professionals can be challenging for even the most seasoned professionals, let alone someone new to the field. This workshop will orient newcomers to the purpose and function of IR, tips and tricks to make the first few years easier, and most importantly will introduce you to some friendly faces. Whether you have been in IR for one week or one year, come join us a get a head start on this most interesting of careers! *Editor's note: This workshop is always well attended, and will prove invaluable for making those crucial contacts early on in your career. This is definitely an Editor's Pick!* ■

# Featured Conference Presentation: Understanding the Factors behind Student Attrition in the Greater Toronto Area

**Tet Lopez-Rabson**
Director of Institutional Research and Planning
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This study is focused on understanding the primary reasons for attrition among college students in the Greater Toronto Area (GTA) colleges.

This study is based on research conducted by Seneca College (2004, 2008) as well as a subsequent study by the GTA Institutional Research Network. The preliminary report will provide insight into the following questions:

- What are the top three influencers on students' decision to discontinue their college program?
- Are students satisfied with their decision to leave?
- What proportion of students who leave, return to PSE?

The study aims to investigate the empirical applicability of Dr. Vincent Tinto's model of institutional student departure in the context of the GTA college system. While Tinto's model has been tested in several retention studies and shows that positive engagement can affect student retention, it has not yet been applied in the GTA colleges.■

# Featured Conference Presentation: Research into Action or on the shelf?

**Graham Orpwood**
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How often have most of us conducted a great research project, only to see our well thought-out "implications for practice" go ... nowhere? This experience is only too frustratingly common to many of us in the research business, even to those in fields of professional and institutional research, where we expect it to make a

difference. Some years ago, while working for the Science Council of Canada – then a federal science and technology policy think-tank – and hoping to avoid such an outcome, I developed a new research strategy called *Deliberative Inquiry* and have been using it ever since in a variety of educational policy contexts.

Deliberative inquiry involves two processes that interlock with each other and that continue simultaneously: deliberation involving the full range of stakeholders in the policy area involved, and inquiry or research into questions relevant to the policy deliberations. The research drives the deliberative process and the deliberations drive the research. Researchers and all of the practitioners are involved in a continuous conversation or debate with each other – the French term for deliberative inquiry is "*investigation dialoguée*" – and the recommendations for action emerge from this conversation, informed by research but not dictated by it. The most powerful result of deliberative inquiry is that it results not only in "data-driven" and feasible courses of action but, equally important – maybe even more important – in a large number of people who, through their participation in the deliberative inquiry, have become committed to those courses of action.

The latest application of this research strategy has been in the College Mathematics Project (CMP), which began from a concern that too many students entered first year college programs and failed their initial mathematics courses, thereby putting their program completion at risk. CMP now involves all twenty four Colleges of Applied Arts & Technology in Ontario and has involved hundreds of educators at both schools and colleges, has produced both new research analyses and conversations about a wide range of policies and practices.

You can hear more about CMP and Deliberative Inquiry at the CIRPA conference in Ottawa. ■

**The Grim Reaper of Reporting**

# Featured Conference Presentation: Factors Affecting Expenditures of Academic Centres at Postsecondary Institutions: An Empirical Analysis

**Edward H K Acquah**
Senior Institutional Analyst
Athabasca University
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Recently, postsecondary institutions in Canada have come under increasing pressures from the federal/provincial governments that hold them accountable for funding and services they provide. Effective departmental budgeting supports the core mission of PSE institutions. Using the total expenditures budget allocated to each academic centre during the 2008/09 fiscal year as the dependent variable regressed on a set of predictor variables, the results show how the number of faculty and support staff, the credentials awarded, the number of credit hours produced, and the number of programs and courses offered during the 2008/09 fiscal year account for the differences in the expenditures of academic centres. The results also show that economies of scale exist across departments.■

# Featured Conference Presentation: Validation Statistics for KPIs with Samples using Ontario College Data

**Tony Podziemski**
Research and Data Specialist
Georgian College
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Using the Ontario college KPI model and several aggregate measures, this is a case study on validating KPI self-report survey data. Given 10+ years of province-wide data at our disposal, this study provides a starting point for the oft-overlooked task of validating our measures. Put your grad school cap on to review convergent and discriminant validity, locating free regional data sources, and applying simple regression statistics. Actual data and results are presented; no colleges were harmed in the making of this study.■

# Featured Research: Where GIS Analysis fits into the IR Landscape

**Katerina Gonzalez**
Financial and Institutional Analyst
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Our office first ventured into the world of Geographic Information Systems (GIS) three years ago, when a map depicting the geographic origin of Brock's students was requested. Our utilization of the technology has since evolved into a much larger enterprise, supporting the university's marketing, recruitment and admissions efforts.

GIS is defined as "any [information] system that captures, stores, analyzes, manages, and presents data that are linked to location….[through] the merging of cartography, statistical analysis, and database technology."[1] Where geography adds meaningful information to a question under study, maps facilitate the visual analysis of patterns, trends, and relationships within and across areas.

At Brock, mapping helps answer questions like: "who are our applicants and where are they coming from"? It helps us identify application trends and demand for programs by census boundaries as well as user-defined neighborhoods.

We also map applicant data by choice (e.g. Brock was first choice/not first choice), conversion statistics (e.g. offers-to-registrants), and applicant type (e.g. directly from high school/all other) to gain further insight into geographically-based patterns and behaviours.

Information such as this helps the university to develop and monitor targeted advertising, marketing and recruitment campaigns. Since we know where our efforts are directed, we can also evaluate their effectiveness by comparing outcomes to previous years in the relevant locations.

To further understand factors that might affect future growth or decline in our applicant pool, we created maps that overlaid public domain data (census data, population projections) with Brock's application statistics in different geographic areas. Other types of thematic maps overlay internal statistics, such as number of applicants/offers/ registrants over conversion rates (see next page).

## QUICK GIS FACTS

What 'GIS' means
- **Geographic Information System**

What 'GIS' is
- **Any information system that stores, analyzes, and displays information by geographic location**

What 'GIS' does
- **Answers the question 'where' in addition to 'who', 'what', 'why', and 'when'**
- **Facilitates the visual analysis of patterns, trends, and relationships**

Common uses in IR

***Used to support:***
- **Marketing**
- **Recruitment**
- **Advancement**

***by presenting information by geographic areas to help:***

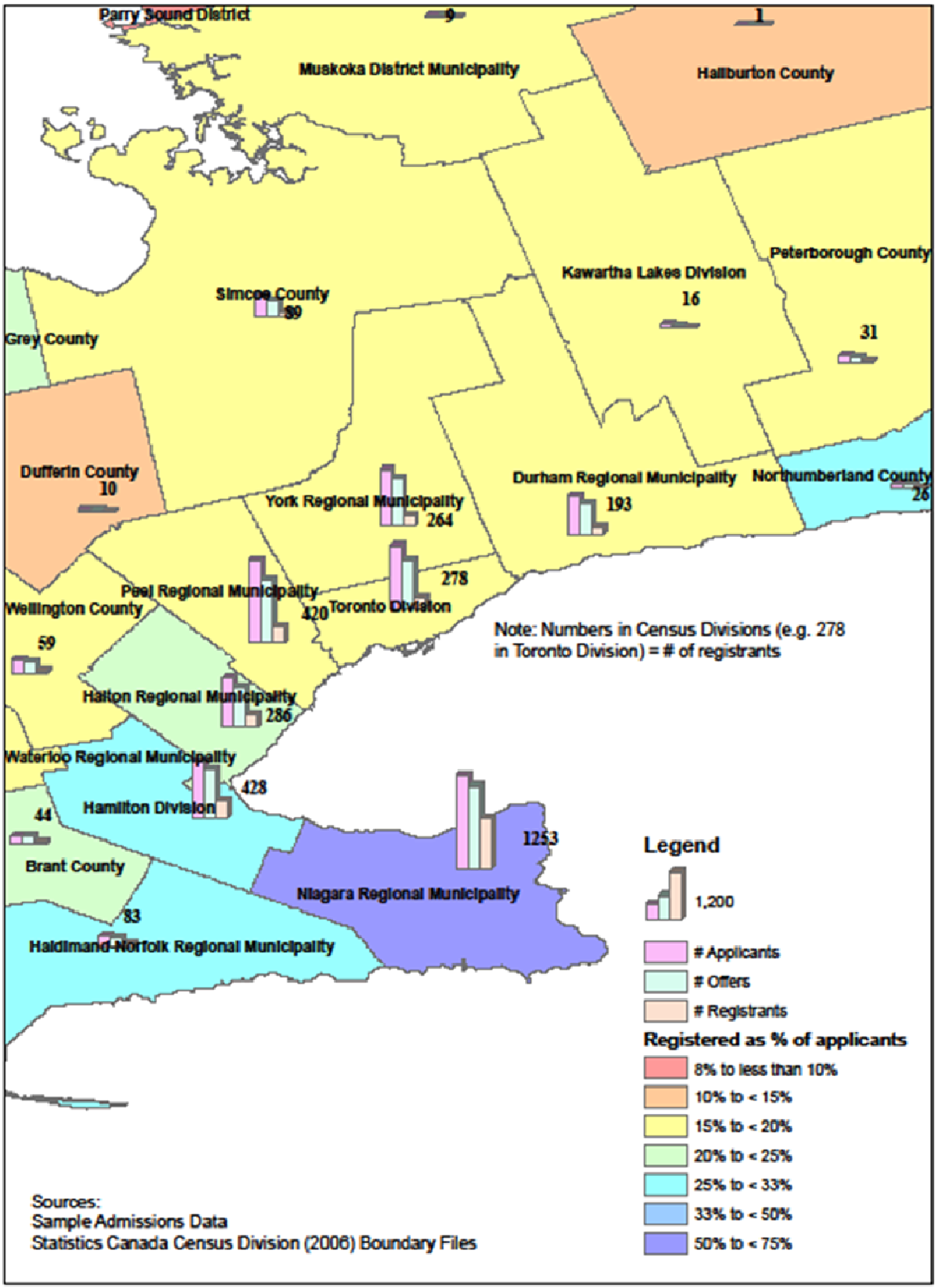
- **forecast demand**
- **promote programs**
- **target efforts**
- **evaluate the effectiveness of targeted campaigns**

Mapping has also supported efforts to optimize bus routes and schedules. Students' local addresses, mapped by Forward Sortation Areas (the first three digits in a postal code), are one indicator of the potential demand for busing across the city and the region.

GIS technology has enabled Brock to apply a geographic market approach to decision making. We continue exploring possible ways to employ this powerful tool to help inform other efforts, for example, those aimed at under-represented groups.

[1] Wikipedia (2010). Geographic information system. Accessed on Sep 1, 2010 at http://en.wikipedia.org/wiki/GIS

# Sample Thematic Map
# Applicant Statistics, Domestic, Undergraduate
# by Ontario Census Division




■

# Featured Research: Academic Success Factors for International Students: A Regression Study

**Kristen Hamilton**
Research Analyst
Thompson Rivers University
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Too often, institutional administrators make decisions based on personal opinion, anecdotal evidence, or even wishful thinking. This study exemplifies a data-based decision making process that was supported by the department of Institutional Planning & Analysis at Thompson Rivers University.

This research was conducted as the result of a request from the TRU Senate International Affairs Committee (SIAC). The committee requested a study on the effectiveness of certain student success courses for International students (they were considering making the course mandatory). This original research question was expanded to include an analysis of the factors that affect and/or predict the academic success of this student group. The objectives of this study were to:

- fit an appropriate regression model predicting the most important factors affecting academic success of international students at TRU, and;
- effectively communicate these results back to stakeholders.

The study was framed in the context of previous research on academic success at TRU and across Canada. A resulting dataset included over 22 variables that were selected based on previous research and the specific questions from the SIAC. Theoretical influences included: Tinto's theory of student retention and Kuh et al.'s models for student engagement (National Survey of Student Engagement). Two main student success outcomes were investigated: cumulative GPA (CGPA) and retention.

The methodology chosen for this study was fixed linear regression and binary logistic regression. Linear regression was chosen based on the continuous dependent variable (cumulative GPA) and the prevalence of ratio predictive variables (13 of 22). Other variables included ordinal data and nominal variables ("dummy" coded). The model was fitted by excluding non-significant variables step-by-step. Logistic regression was chosen for the "retained/gone" outcome variable.

The strongest factor predicting CGPA was first term GPA. On its own, first term GPA was a significant factor for predicting CGPA: $R2 = .62$, $F(1, 6049) = 9935.82$, $p < .001$. When first term GPA was combined with other significant factors, the multiple regression model resulting from the study can explain 65% of the variance in the CGPA of international students. For every one unit increase in first term GPA (i.e. from 2.00 to 3.00) the average student's CGPA will increase by .60. Other significant factors (in order of effect size) include: Tourism, Gender, Europe, Africa, Number of terms on probation, Development, Business, Start Year, and Age.

Of course, the most significant factor in predicting retention is CGPA. The higher a student's CGPA, the more likely they are to be retained. A binary logistic regression model that included CGPA as the only variable was significant, and predicted retention with 64% accuracy: $\chi 2 (1, N = 6051) = 111.46$, $p < .0014$. This relationship exists partly because of the Satisfactory Academic Progress policy, which states that students may be involuntarily un-enrolled from TRU if their academic performance is consistently below a certain standard. However, the relationship between CGPA and retention exists for students who have CGPAs above this cut-off as well: $\chi 2 (1, N = 6051) = 88.49$, $p < .001$.

This study confirmed that previous academic performance is the strongest predictor of future academic performance. In terms of programming, students in baccalaureate programs tend to have more positive outcomes. Students from Europe, despite achieving higher CGPAs, are more likely to leave TRU without having completed a credential. This is also true for older students; cumulative GPA, as well as the likelihood of attrition, increases with age. Students from Africa, however, are much more likely to be retained despite achieving lower CGPAs. Students who take at least one ESAL course are also more likely to be retained. As first term GPA is the greatest predictor of CGPA, we recommended that interventions for academic success be made within the first academic term at TRU.

The outcomes of this study were shared via report to the SIAC, and will likely be shared through a presentation as well. This study will help inform decision-making for international student success programs at TRU, and will assist student support staff (academic advisors, counselors, etc) in helping students increase their chances of academic success at TRU. ■

# Editor's Pick: Scholarly Article

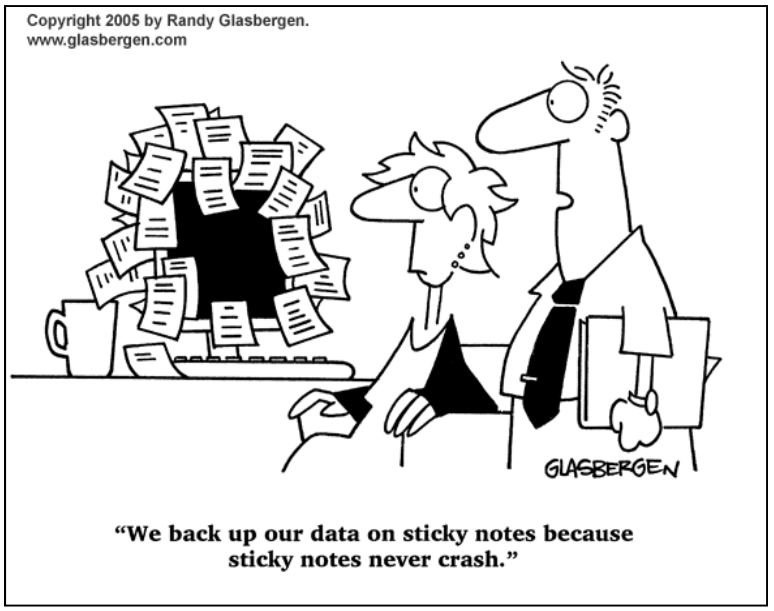
Parmley, K. (2009). Raising the institutional research profile: Assessing the context and expanding the use of organizational frames. *New Directions for Institutional Research*, *2009*(143), 85-93. doi:10.1002/ir.306

Abstract: It is not uncommon to hear institutional researchers, both those new to an institutional research leadership position and veterans, lamenting their absence from the decision-making table. How can institutional research professionals develop strategies that get us to the table?

*Everyone in the IR profession has experienced the frustration, at one time or another, of being brought into a project either too late or not at all. Kelli A. Parmley, Assistant Vice Provost for the Center for Institutional Effectiveness (Virginia Commonwealth University), reviews some of the circumstances that tend to cause this to happen, and makes some recommendations for IR professionals who are looking to secure a seat at the table. She first addresses the difficulty that we may have in actually finding the 'table' where decisions are made. This, Parmley observes, happens because of the shared governance in most higher education institutions and the ensuing bureaucracy that it creates. Then, four organizational frames that can be used to understand an organization are introduced: structural leaders frame, the human resource frame, the political frame, and the symbolic frame. Finally, some practical recommendations are made:*

- *assess the effectiveness of your IR office*
- *talk about IR values and vision*
- *develop IR ambassadors*
- *nurture individual relationships with powerful players*
- *learn the financial infrastructure and language*
- *increase your visibility on campus*
- *look for the right opportunities to take risks*
- *do not be afraid to make recommendations*
- *understand that not all leaders are ready for your report.*

*Parmley describes each of these strategies in detail, and I would encourage everyone to check out the full-length article at your library (available online via Academic Search Complete).* ■




*Kristen and Joan would like to once again thank members for their contributions to this newsletter. We look forward to your submissions (research, editorials, monographs, practitioner guides, etc.) for the* ***20th Anniversary*** *issue (to be published in January 2011). Submissions should reflect on the changes in the IRP profession in the past 20 years. The co-editors will accept submissions received by December 15th, 2010.*

# CIRPA Executive

**President** (Term 2009-2011)
Cameron Tilson, Concordia University

**Vice-President** (Term 2009-2011)
Peter Seto, Mount Royal University
**Treasurer** (Term 2009-2011)
Caroline Lachance, Association of Universities and College of Canada (AUCC)

**Secretary** (Term 2008-2010)
Kate McGovern, University of Regina

**2010 Conference - Ottawa, Ontario**
Caroline Lachance, Association of Universities and College of Canada (AUCC), Conference Co-Chair
Tony Eder, University of Victoria, Conference Co-Chair

**Members at Large**
Anna Burke, Nova Scotia Community College (Term 2008-10)
Elizabeth Lane, Dalhousie University (Term 2008-10)
Mardere Birkill, Portage College (Term 2009-11)
Sharon Shultz, Keyano College (Term 2009-11)

**Nominations Committee**
Jeff Donnelly, Chair, Northern Alberta Institute of Technology (NAIT) (Term 2009-11)
Heather Friesen, College of the North Atlantic (Qatar) (Term 2008-10)
Jim Doran, University of Alberta (Term 2008-10)
Shauna Lehtimaki, Laurentian University (Term 2009-11)
Jan O'Brien, Okanagan College (Term 2009-11)

**Newsletter Co-Editors**
Kristen Hamilton, Thompson Rivers University
Joan Bessey, Memorial University (Emeritus)

# 2010 CIRPA Conference: An Abundance of Choice

**Saturday, Oct. 23rd**

SCUP Pre-Conference Workshop

**Sunday, Oct. 24th Workshops**

Peter Seto, Mt Royal - Strategic Enrolment Management (SEM) 101

Bruce Winer and Elio Velazquez, Carleton - Cubology 101 - Selected mysteries of the multi-dimensional Data-verse

Joanne Heslop, STP - Advanced PowerPoint with Animated Excel Charts

Anna Burke, NSCC - Introduction to IR for Newcomers

Sara Montgomery, Queens - GIS Applications in IR

Mardere Birkill, Portage - Translating Strategy to a Balanced Scorecard

**Keynote Address: Paul Davidson**

**President's Reception**

**Monday, Oct. 25th**

**Keynote Address: Dr. Chris Waddell**

Alex Usher and Edyta Kaznowska, HESA - Globe and Mail Survey: Annual Update from Higher Education Strategy Associates

Pierre Mercier, Ottawa - Applying Factor Analysis to the Graduate and Professional Student Survey

Daniel Morris, Grant MacEwan - Challenges with measuring retention at a 'new' university

Panel: Common University Data for Canada

Tyler Hall and Nathasha Macdonald, Carleton - Survey Mania! Are we spreading ourselves too thin or are surveys a modern day necessity for accountability?

Mike Krywy, Red River College - Paths to Success - A model for Integrated Planning

Julie Lalande, Dalhousie - Staying or Leaving: Exploring student decision-making and their retention status

Herb O'Heron, AUCC - Factors Influencing Demand for University Education

Sally Nimon, UNISA -Collaborating in the Antipodes: Issues and Strategies for Cooperation during Interesting Times

Tet Lopez-Rabson, Seneca - Understanding the Factors behind Student Attrition in the Greater Toronto Area (GTA) Colleges

Panel: Assessing how our Aboriginal Students are Adjusting to university: A Prairie Imperative

Ursula McCloy, HEQCO - How did the recent economic downturn affect the labour market experience of Ontario's College Graduates?

Alex Usher, HESA - The Longitudinal Survey of Low-Income Students (LSLIS): Final Results

Shirley Jorgensen, Dawson - Student Satisfaction and Student Success (Sex and Disability)

Nelson Rogers, Algonquin - Academic and Administrative Collaboration for Strategic Programs and Services Planning

Margaret Whetstone, OCAS - Strategic Planning -Ontario College Enrolment Projections

Alan Chan, Winnipeg - Predicting University Performance: A Case study

Felice Martinello, Brock - Academic Regulations, Tuition Refunds, Student Persistence, and Program Changes

Diane Barrafato, Mohawk - An Exploration of a Systems Approach to Regular Program Evaluation for Ontario Colleges

Jim Doran, Alberta -The Poor Man's Data Warehouse

Karen Kwan, Calgary -Quality Money: A Strong Partnership

Mark Horseman, Saskatchewan - Master Data Management at Postsecondary Institutions

Jo Stewart, Brock - Examining First Year Grades and Course Withdrawals of Transfer Students

Beyond 20/20 - Cost Effective Business Intelligence

Scantron - Measuring Institutional Effectiveness with Class Climate Software

CCI Research Inc. - Enhancing Student Outcomes: Research Principles and Approaches

**Social Night: Canadian Museum of Civilization**

### Tuesday, Oct. 26th

**CIRPA Annual General Meeting with breakfast**

**Keynote Address: Ian Clark and David Trick**

Joanne Heslop, STP - Student Transitions Project: Collaborating across BC's Post Secondary System

Angelika Kerr, HEQCO - An Exploration of Student Pathways from Post-Secondary Application to the Labour Market in Ontario

Shane Simpson, Mount Royal: The Case of the True Leaver

Panel: Cross Institutional Analysis of Retention – Beyond CSRDE

Helen Sheridan, Mohawk - Roadmap to Student Success: Know Your Students and Implement Proactive Strategies

Kelly Saretsky, CONA Qatar - Creating the Future … Together: Using Appreciative Inquiry for Strategic Planning

Luc Simon, Laval - Collaborative strategies to study CGPSS Survey Data

**Closing Luncheon and Awards Ceremony**

Miriam Kramer and Spencer Keys, CANED - What Students Think and Want: Results from the First-Ever Canadian Student Survey

Kate McGovern, Regina - Working together to assess and address Aboriginal Student Engagement

Thelma Lussier, Manitoba - A Further Analysis of 2008 NSSE Results From Four Canadian Universities

Dawn Gordon, MPHEC - Five Years On: A Survey of Class of 2003 Maritime University Graduates

Alex Usher, HESA - Measuring Differences in Academic Challenge and Grades at Canadian Universities

Chris Conway, Queens - NSSE National Data Analysis Project

Richard Wiggers, HEQCO - Expanding Graduate Enrolments: The Recent Experience of Ontario Universities

Graham Orpwood, Seneca - Deliberative Inquiry into College Mathematics

Yuqin Gong, UPEI - Scholarship design and re-design: The role of institutional research

Mark Neumann, Sheridan - A Demonstration of an Enrolment Optimization and Forecasting Tool

Cheryl Sivertson, UVic - At your self-service: Enrolment reports, Factbook reports and Key Performance Measures on Demand

Edward Acquah, Athabasca - Factors Affecting Expenditures of Academic Departments: An Empirical Analysis

Tony Podziemsk, Georgian - Validation Statistics for KPIs

Juan Xu, Brock - How much has Academic Faculty Helped in Generating Institutional Revenues

Litco Systems - Product Demonstration

eXplorance Inc. - A Fresh Look at Response Rates

SAS - Embracing the Analytics Journey: Moving from “Operations” to “Optimization” in Higher Education

### Wednesday, Oct. 27th

Canadian University Survey Consortium

*Editor’s note: For a full conference schedule including presentation times and room locations, see the conference website at [http://www.cirpa-acpri.ca/Ottawa2010/](http://www.cirpa-acpri.ca/Ottawa2010/)*