

The Department of Statistical & Actuarial Sciences Celebrates 30 Years at The University of Western Ontario

A Brief Historical Account

Originally, Statistics and Actuarial Science courses were taught within the Department of Mathematics at the University of Western Ontario. By the early 1920's, the Department's course offerings included an introductory Statistics course and a course called "Business Arithmetics". In 1922, Harold Kingston, then Head of the Department, initiated an Actuarial Science program, introducing three senior courses as well as a graduate course on the subject. The Department also offered a senior Statistics course in the 1930's, during which period it comprised only a few full-time faculty members.

Randal Cole joined the faculty ranks in the early 1940's. He later taught a graduate course on mathematical statistics, making use of standard textbooks on the subject. Gordon Magee was designated new Head of the Department in 1950. John Moore, who was hired thereafter, often taught actuarial courses, including a course on Life Contingencies that was added to the actuarial syllabus. Later, John Mereu, a Fellow of the Society of Actuaries (SoA) who was holding a senior position at London Life, taught this course in one form or another from 1957 to 2009.

Enrolments increased significantly in the 1960's. Mir Maswood Ali, a Ph.D. graduate from the University of Toronto, was hired in 1961. His contribution to the development of undergraduate and graduate programs in Statistics is of note. Leland Ritcey was appointed in 1966 and retired in 1973. He became the first holder of the Richter Memorial Professorship of Actuarial Mathematics. Two statisticians, namely, Tom Wonnacott (Princeton) and M. Safiul Haq (U. of Toronto), respectively joined the Department in 1966 and 1967.

In 1967, David Borwein took over the reins of the Department, which was then composed of nineteen full-time faculty members. Lai Kow Chan, one of Mir Ali's students, was hired in 1968. He stayed until 1980, at which point

he took on a position at the University of Manitoba.

Ian B. MacNeill (Stanford) joined the Department of Applied Mathematics in 1971. By the 1970's, Statistics had burgeoned as a discipline and course offerings on the subject were shared by the departments of Mathematics and Applied Mathematics. In 1977, MacNeill, then cross-appointed in both departments, formed the Statistics and Actuarial Science Group; as a result, the statisticians enjoyed semi-autonomy within the Department of Mathematics. That very same year, he also established StatLab, a statistical consulting unit then staffed by Jon Baskerville, John Koval and George Wells.

The Faculty of Science provided the newly formed SAS Group with a grant of \$100,000 to fund computing resources for teaching and research. The Faculty of Engineering Sciences contributed an equal amount to establish the SEAM computing lab for use by the SAS Group, Engineering and Applied Mathematics. Space was found for a mini-computer and twenty terminals. A card reader was purchased as well, as this was the way a generation of users accessed computing resources.

The late seventies witnessed a sizeable increase in the Honours Actuarial Science student contingent. Harry Panjer joined the Department in 1976 as the first Fellow of the Society of Actuaries to be hired. He oversaw the actuarial program from 1976 to 1980 at which time he moved on to the University of Waterloo. David Bellhouse and Ian McLeod, both of whom obtained their doctorates in Statistics from that university, were respectively appointed as Assistant Professors in 1977 and 1978.

To support StatLab, the DSAS was successful in obtaining the first NSERC Core grant (1980–83, \$33,000) awarded to any mathematical sciences department in Canada; this was followed with an Infrastructure Grant for 1983–1986 of \$100,000, which was renewed triennially until 1992.

Cost recovery by StatLab for consulting services provided over the period 1977–1992 was \$1,225,000, a significant portion of which came through statistical consulting and data management for a broad multicentre clinical trial carried out in the 1980's and biometric consulting provided to Victoria Hospital.

Following MacNeill's bid to the Faculty of Science and the provincial government for the establishment of an independent department, the Department of Statistical & Actuarial Sciences (DSAS) was officially formed on July 1, 1980. As Chair, he undertook an extensive curriculum reform with Bellhouse's assistance. Enrolments increased substantially within the next few years, this being particularly the case in introductory courses. The DSAS was then housed in the Spencer Engineering Building. Reginald Kulperger (Carleton) and Serge Provost (McGill) respectively began their association with the Department in 1982 and 1983.

New computing equipment in the form of a VAX 11/785 was purchased in 1983 at a cost of \$225,000 of which \$108,000 came via an NSERC Major Equipment Grant, the first to be awarded to any mathematical sciences department in Canada.

On May 27–31, 1985, a series of symposia was held at the University of Western Ontario in honour of V. M. Joshi on the occasion of his seventieth birthday. By then, Joshi had established an exceptional research record as Distinguished Professor of Statistics in the Department. These symposia were chosen to reflect his research interests as well as areas of expertise in statistical science among faculty members of the departments of Statistical and Actuarial Sciences, Economics, Epidemiology and Biostatistics, and Philosophy. They attracted many prominent researchers and resulted in the publication of six volumes comprising 117 articles, the so-called "Joshi Festschrift".

Several faculty members who were specialized in Actuarial Science were hired in the 1980's, including Beda Chan, Colin Ramsey, James Broffitt and Krzysztof Stroinski. All of them left before they could build up sufficient credentials to qualify for the Richter Chair. From 1986 to the early nineties, Provost (ASA) ensured that the Department's curriculum was kept current with the Society of Actuaries' syllabus.

Gary Umphrey was hired in the mid-eighties to teach service courses in Statistics; he remained in the DSAS for over a decade. Ejaz Ahmed (Carleton) taught Statistics courses in the Department as Assistant Professor from 1987 to 1989; he then joined the faculty ranks at the University of Regina. In 1988, the DSAS engaged David Stanford (Carleton). That year also marked the arrival of Oliver Anderson who was previously affiliated

with Temple University. He passed on in January 1995 following a long battle with cancer.

John's Mereu's substantial contributions in the areas of actuarial research, education and practice were recognized at the 25th Annual Actuarial Research Conference, which was held in the Department in August 1990. John Haddad was offered a limited-term appointment in the early nineties; a few years later, he accepted a position at the American University of Beirut. A number of service courses were taught by Robert McGowan at that time.

The DSAS relocated to the newly built Western Science Centre (the Paterson Building) in 1992. It occupies the second floor of the building, which houses the offices of the administrative staff and teaching Faculty, a conference room, a large and a medium-sized teaching room, both of which equipped with state-of-the-art AV equipment, a student Help Centre, the graduate students offices and an undergraduate computing laboratory that primarily supports our honours courses.

1992 marks the beginning of David Bellhouse's term as Chair. Up to that point, the DSAS combined honour's programs could boast the largest enrolment in the Faculty of Science. Bruce Jones, a Fellow of the SoA who was also holding a PhD degree from the University of Waterloo, joined the Department that very same year. He was designated as the Richter Chair of Actuarial Science the following year. Having both been hired in 1993, James Stafford and Christine Anderson-Cook respectively left in 1996 and 1999. Hao Yu (Carleton) joined the faculty ranks in 1994. Ever since, he has substantially contributed to the smooth operation of the Department's superb computing facilities.

Both Mary Millard (FSA) and Steve Kopp (FSA) have been lecturing in the DSAS for many years. James Adcock has been teaching Statistics courses after completing his Master's degree in 1999. All of them have been to this day actively involved in academic counseling and outreach activities. Deli Li (Regina) taught in the Department during the academic year 1996–1997 before moving on to Lakehead University. Duncan Murdoch (Carleton) was appointed as Associate Professor in 1998. Michael Bean landed a position in the insurance industry after a brief stint in the DSAS in 1999–2000.

Ian McLeod assumed the chairmanship of the Department from 1999 to 2004. Several faculty members were hired during his tenure. John Braun (U.W.O), Ricardas Zitakis (Vilnius) and Jiandong Ren (Temple) were respectively appointed as Assistant Professors in 2000, 2001 and 2003. Debbie Dupuis joined the faculty ranks of HEC at l'Université de Montréal in 2005 after spending four years in the DSAS. Wenqing He (Waterloo) and Kristina Sendova (Waterloo), were both hired as tenure-track Faculty in 2004. That year, a full-time limited-term lecturer appointment was offered to Sohail Khan; he is currently holding a similar position at the University of Winnipeg. Owing to financial considerations and staffing difficulties, StatLab folded its operations in 2004.

Bruce Jones became Chair of the Department in 2004. Under his leadership, graduate programs in Actuarial Science were developed and Honour's and Master's programs in Financial Modelling were introduced.

In 2006, the DSAS hosted the Annual Meeting of the Statistical Society of Canada. That year, Rogemar Mamon (U. of Alberta) and Xiaoming Liu (U. of Toronto) were hired as tenure-track Faculty members, and Mark Reesor, already a Faculty member in the Department of Applied Mathematics, was cross-appointed. That same year, Matt Davison, Professor in the Department of Applied Mathematics and Tier Two Canada Research Chair holder in Quantitative Finance, was jointly appointed. Hristo Sendov and Bethany White, both graduates of the University of Waterloo, respectively joined the Department in 2006 and 2008. Donald Fraser (Princeton), Emeritus Professor at the University of Toronto, was recently appointed as Adjunct Professor.

The DSAS is recognised for its pedagogical excellence. In fact, several departmental members have won teaching awards, including Bellhouse, Davison, Jones, Kopp, Millard, Mamon and Provost. Yearly, the Department is granting several scholarships and awards to its undergraduate students with a view to encourage scholastic excellence. Over the past decade, three of our students received the UWO Governor General's Medal for achieving the highest standing in any four-year honours program at the University. The Department's curriculum is being regularly reviewed to ensure that it remains current and relevant. In particular, the Actuarial Science course offerings are geared toward the successful completion of several of the SoA Associateship examinations.

The Actuarial and Statistical Undergraduate Association contributes to providing a fulfilling student experience by organizing social events and activities and offering various services and resources to its members. Our students have the opportunity to avail themselves of international exchange and internship programs. At the graduate level, they have the option to enroll in an OCGS-approved Collaborative Program in Biostatistics that operates within both our graduate program and Epidemiology and Biostatistics’.

It should be mentioned that ever since the Department’s inception, its faculty members have been consistently successful in securing research grants. The successes of our graduates, whether in academia or industry, offer impressive testimony to the excellence of the training they have received. What is more, the DSAS has recently experienced a surge in graduate enrollments. This indeed augurs well for its continued academic prominence.

Serge B. Provost
November 2010

MAIN SOURCES

- Departmental archives including the Brief submitted to the Ontario Council on Graduate Studies in 2008.
- <http://www.stats.uwo.ca/>
- http://www.stats.uwo.ca/bellhouse/Actuarial_Science_at_UWO.pdf
- Personal reminiscences of Ian B. MacNeill.