

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.

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.

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.

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.

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 of \$100,000 for 1983–1986, which was renewed triennially until 1992.

During 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 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 in line with the Society of Actuaries' syllabus.

A symposium was held in May 1987 in celebration of Ali's 25 years at Western; a festschrift entitled "Recent Developments in Statistics and Actuarial Science" was subsequently published.

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. Sadly, he passed on in January 1995 following a long battle with cancer.

John 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 took on a position at the American University of Beirut.

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.

In the early nineties, several faculty members went to Warsaw to take part in a Summer School in Actuarial Science, which was run yearly by Stroinski with a view to training actuaries in the former Eastern Block countries.

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. Mary Millard (M.Sc., FSA) has been teaching yearly in the Department since 1992; she had previously been associated with StatLab and coordinating large enrollments courses. Having both been hired in 1993, James Stafford and Christine Anderson-Cook respectively resigned 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. MacNeill retired in 1997; he is to this day maintaining an active research programme.

Steve Kopp (M.Sc., FSA) has been a full-time lecturer since 1994; he has been teaching in the DSAS in one capacity or another for over 25 years. 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. The year 2000 marks the retirement of M. Safiul Haq and John Baskerville.

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 Zitikis (Vilnius) and Jiandong Ren (Temple) were respectively appointed in 2000, 2001 and 2003. James Adcock (M.Sc.) has been teaching Statistics courses as a full-time lecturer since January 2002. 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; five years later, he took on a probationary lecturer position at the University of Winnipeg. Wonnacott officially retired in 2001. Owing to financial considerations and staffing difficulties, StatLab folded its operations in 2004.

Bruce Jones acceded to the chairmanship 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, joined the Department in 2007. Donald Fraser (Princeton), Emeritus Professor at the University of Toronto, was recently appointed as Adjunct Professor.

The DSAS has benefited over the years from the services of many sessional lecturers, among whom Mahdi Alkhamisi, Clayton Block, James Blocker, A. M. Chaudry, Rob Jackson, Angela Jonkhans, Zinovi Krougly, Robert McGowan, Vicki Olds, Robert Philips, Scott Sadler and Richard Strube may be mentioned.

Ever since the Department's inception, its members have consistently been successful in securing research funding. Several faculty received awards for their publications, including Provost (the 1996 Jacob Wolfowitz Prize), McLeod (the 1984 W. R. Boggess Award), Braun (the 2005 Canadian Journal of Statistics Award), Murdoch (the 2007 Canadian Journal of Statistics Award) and Mamon (the North American Actuarial Journal Annual Prize for best paper published in 2008). Many have also earned significant distinctions for their professional achievements, among whom Bellhouse: Fellow of the American Statistical Association (1987); MacNeill: Fellow of the American Statistical Association (1985), Fellow of the Institute of Mathematical Statistics (1993), Distinguished Achievement Medal awarded by the American Statistical Association—Section on Statistics and the Environment (1995), Honorary Member of the Statistical Society of Canada (2006); Mamon: Fellow of the Higher Education Academy, the Royal Society of Arts and the Royal Statistical Society, UK (2004); and Provost: Fellow of the Royal Statistical Society (1996).

The DSAS is recognised for its pedagogical excellence. In fact, several departmental members have won teaching awards, including Bellhouse, Davison, Jones, Kopp, Mamon, Millard, Stanford, Provost and Yu. Yearly, the Department is granting several scholarships and awards to its undergraduate students with a view to encouraging 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. Thanks to its lobbying efforts, London will host the 2011 Actuarial Students' National Association Convention. Currently, students seeking assistance for their course selection can rely on the sound recommendations of three experienced academic counselors in the persons of Kopp, Millard and Adcock.

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'.

Throughout the years, our support staff has been most helpful to faculty and students alike. Administrative Assistants Judy Congdon, Corinne Bender and Jennifer Dungavell deserve special accolades for their professionalism and dedication.

Many of our graduates have distinguished themselves in the course of their careers. Our alumni's successes, whether in academia or industry, offer impressive testimony to the excellence of the training they have received. What is more, the Department has recently experienced a surge in graduate enrollments. This indeed augurs well for its continued academic prominence.

*Serge B. Provost
December 2010*

MAIN SOURCES

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