Statistics and Actuarial Science

On Top of Burnaby Mountain

Simon Fraser University
British Columbia, Canada

2002-2
Newsletter

Postal or Email?

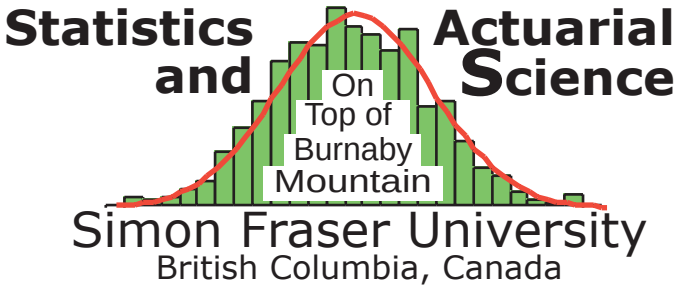
This newsletter was sent to you by snail-mail using information from the Alumni Office. Did you know that one of the benefits of being an alumni from SFU is a permanent email address from SFU?

This is an easy way to keep in touch with SFU and to receive departmental communications. It can easily be forwarded to another email address so that you don't have to keep checking it.

The Department also maintains the following email lists that may of be of interest to our members.

stat-jobs	jobs in statistics are regularly forwarded to this email address
stat-seminar	seminar announcement at SFU in our Department
stat-pnwsm	members interested in the Pacific Northwest Statistical Meetings held twice yearly.

Please contact us (sholmes@sfu.ca) if you wish to be added to these lists.



2002-2 Newsletter

Welcome to the start of a new academic year.

It is just 15 months since our Department was established; we had 15 students graduate with a Major in Statistics or Actuarial Science in June 2002; we have 15 graduate students registered in the 2002-2 term (full time, not on co-op). Coincidence or Conspiracy?

Of course our education tells us that this is mere co-incidence with no underlying meaning. People appear to be "hardwired" to search for patterns (real or meaningless) in data - Statisticians and Actuaries are "hardwired" to assess the odds of such patterns to help assess the usefulness of the information. Such skills are ever more needed in today's "instant" society - visit the alt.conspiracy newsgroups for evidence of extreme pattern searching.

After our first year as a separate Department, we are now at the point of doing things the "second time" around. This will now allow us time to concentrate on new initiatives such as programmes in Actuarial Science, Biostatistics, Bioinformatics, or Data Mining and reviewing our undergraduate and graduate programmes.

It is gratifying to see the increase in student interest in Statistics and Actuarial Science. During Academic Options Day, many students came by to ask questions about our programmes. Our Department now has over 50 major students. Over 100 students wrote the last set of actuarial profession exams. Our Stat-450 (Mathematical Statistics) course for the 2002-3 term is expected to have almost 100 students enrolled!

Along with the growth in student numbers, our Department should see some significant growth in faculty numbers over the next two years. We currently are looking to fill five new positions - two in actuarial science; a Canada Research Chair; an NSERC University Faculty Position; and a Lecturer position in Statistics. We look forward to meeting our new colleagues.

These changes should make for interesting times in the next year. If you haven't done so yet, please feel free to come visit us in person or virtually at our web site. We also look forward to hearing from you.

Carl Schwarz
Chair
Phone: 604.291.3376
Email: cschwarz@stat.sfu.ca

Is that statistics?

When students ask, "what can I do with a stats major?", the options are so varied it is hard to give a useful answer. Activities in the department this last year illustrate the diversity of tasks which involve statisticians. Consider these research activities of faculty members: Carl Schwarz and Rick Routledge are heavily involved in the measurements and policy associated with the salmon enhancement program in BC. Charmaine Dean is a team member on grants involving Neonatal Health Services in Canada , Urban Structure Population Health and Public Policy, and Geomatics for Informed Decisions (Forestry). Jinko Graham and Brad McNeney have a grant to study genetic and environmental risk for diabetes, and one for genetic and environmental factors that influence cardiac, vascular, and pulmonary disease. Randy Sitter has been involved in research projects ranging from estimation of the consumer price index to computer expensing in industry. Tim Swartz, Larry Weldon, and Robin Insley have been studying the role of unexplained variability in sports like soccer and golf. Richard Lochart and Michael Stephens have examined the fairness of the 6/49 lottery. Our Adjunct Faculty members are also working in diverse fields. John Spinelli is involved with genetic and environmental risk factors for cancer. Rob Balshaw is working in the area of international clinical trials and epidemiological observational studies in chronic disease and transplantation. Fanlang He is is working on tree spacing as a response to environmental and spatial effects. Paramjit Gill is working on social networks.

And our alumni are gradually spreading around the globe bringing their statistical and actuarial expertise to bear on important problem. We'd love to report on some of the more interesting alumni stories in future newsletters.

Or, another indicator of the diversity of interests in our department is the choice of application areas of our graduate students' recent theses: salmon spawning, abundance, and conservation; financial hedging instruments; gambling systems; industrial experimentation; and social surveys.

Of course, the Statistical Consulting Service sees clients from on campus in various field, but also from off-campus companies and institutions. Forestry, Criminology, Physiology, and Marine Biology are just some of the areas in which the SCS immerses itself.

The skill that all these individuals bring to these problems is an in-depth knowledge of statistics and also a variety of experiences with data-based research. The ability to transfer data-based structures from one context to another is a key skill. For example, the structure of data on the survival of cancer patients can be closely related to contexts involving the survival of computer components, high-tech companies, or salad greens!

Short answers just don’t seem to capture this diversity.

Actuarial science becomes popular
(Reprinted from SFU News: Jun 13, 2002 , vol. 24, no. 4)

Judging from the number of people who wrote this year's professional actuarial exam at SFU as a first step to gaining certification in the field, actuarial science is gaining popularity. Rated as one of the most rewarding and satisfying careers in the Jobs Rated Almanac, an actuary most often prices public and private insurance and compensation. Actuaries also cost social programs for government.

Norman Reilly, co-ordinator of the actuarial science program at SFU's statistics and actuarial science department, says 114 wrote the exam in May at SFU. It is the first of eight offered worldwide and set by international actuarial societies.

An actuary must pass all eight to be officially recognized as an expert in the field. SFU is the only location in B.C. for the first exam. Reilly says the number of people writing the exam at SFU has steadily increased from 10 candidates when it was first offered at SFU along with the university's actuarial certificate program10 years ago. Reilly adds that, since the university started offering a degree program as well in 1999, annual enrolment in actuarial programs at SFU has risen from 12 to about 90 students. SFU is the only university in B.C. offering a degree program in actuarial science.

The discipline's professional exams are so stiff that the pass rate in each exam worldwide is about 35 per cent. But that doesn't deter people from wanting to be recognized in a field that touches people's lives daily. There are about 25,000 actuaries in North America.

New Faculty Positions

As mentioned in the message from the Chair, the Department has been authorized to fill several positions.

We currently have two positions available in our Actuarial Programme. A senior faculty member is being recruited who will take responsibility for organizing and co-ordinating the program. As well, we are recruiting a lecturer to expand the course offerings in the program.

We have identified a Canada Research Chair candidate and should be making an announcement by the end of September.

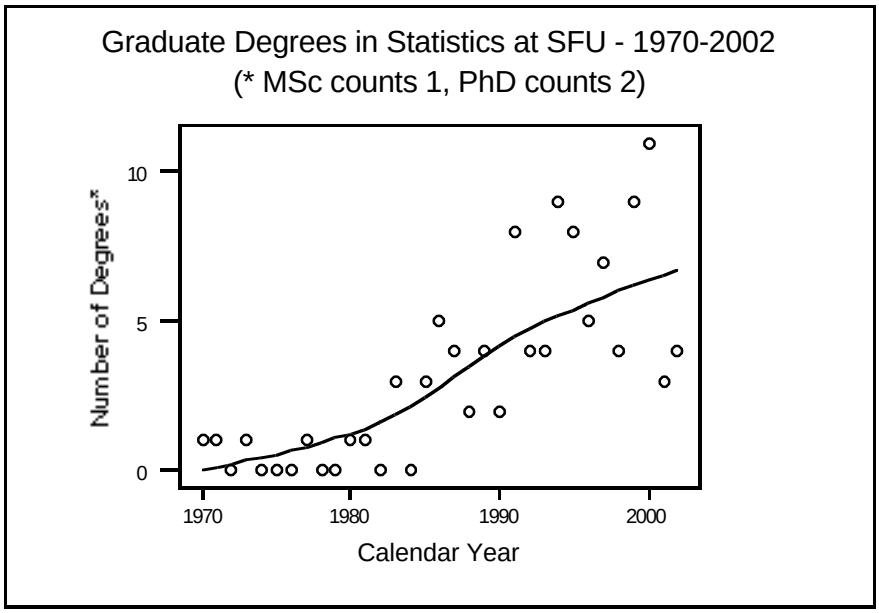
The government mandated increase in enrollment in high technology opportunities (the Double the Opportunity Initiative) has lead to increases in positions in the Faculty of Science of which we have been authorized to start with a new Lecturer position.

Lastly, the Department is actively recruiting candidates for the NSERC University Faculty Awards.

All of the potential candidates will be making presentations this fall, so it will be an exciting time.

Enrollment Trends

Graduate Enrolments:
In the 70s, we graduated 5 M.Sc and 0 Ph.D degrees. In the 80s it was 21 M.Sc and 1 Ph.D. In the 90s, 39 M.Sc and 10 Ph.d. There have been 17 more degrees granted in the last two years, continuing the increased rate. Our current graduate program in Statistics attracts excellent students from around the world. We hope to provide graduate opportunities in the area of Actuarial Science in the near future.



Undergraduate Enrolments

Enrolments in the Department have been growing. Our entry courses in Statistics, STAT 101 (General Statistics) and STAT 270 (Mathematical Statistics) have increased annual enrolments, over 1997-2002 from about 350 and 530 to about 380 and 600, respectively. However, the largest growth has been in the Actuarial Science area, where the entry-level course is ACMA 310 (compound interest), and enrolment has increased from about 35 to 100 over the same period. A course following both STAT 270 and ACMA 310 in major programs is STAT 280 (Applied Probability). This course has benefited from both trends and has seen enrolments increase from about 25 to 150 over the same five year period!

Another measure of the success of the department is its ability to attract and graduate majors and minors in its programs. In this area we have work to do. The department is currently responsible for majors in three areas: statistics (STAT), actuarial science(ACMA) , and management and systems science (MSSC). We graduate about 10 students annually with majors in each area. This is a small number given the number of students who take our courses. The record in students choosing statistics as a minor is very poor - only 3 students in the past five years! (We do not offer minors in ACMA or MSSC.). Some of the curriculum changes mentioned below are aimed at addressing this problem.

Curriculum developments in Statistics at SFU

Our introductory course in Statistics requiring minimal mathematics is STAT 101. This has always been viewed as a service course, supplying students in a wide variety of majors with a familiarity with the use of statistics in data-based research. Recently a new introductory course, STAT 100, has been introduced with the main objective being to expose students to the charm and utility of statistical thinking. Rather than a service course for mathophobes, it is an introduction to probability and data analysis for all students. While its mathematics requirements are low, it is a fairly in-depth immersion in some phenomena of randomness, and also with examples of important analyses of real-world data. The first offering is in the 2002-2003 academic year. Our aim with this change is to make statistics an attractive discipline to a wider variety of students than would be possible with a course like STAT 101.

Another new undergraduate course is STAT 400, Data Analysis, in which advanced students are challenged to be creative with the tools they have learned while analyzing data sets and research questions that have some novel twist. The course emphasizes creativity rather than the optimality stressed in many other statistics courses.

While developing courses on the frontier between undergraduate and graduate work, we often use our special topics course, STAT 490, to branch into promising areas. This device has been used to present undergraduate courses in time series, survival analysis, and spatial analysis in recent years.

Current discussions in the department have been to reconsider our sequence of undergraduate courses in view of the increasing numbers of actuarial majors, and the changing nature of our discipline. The challenge will be to re-orient the sequence without causing too much confusion in the requirements of the affected majors. However one change which seems to have the unanimous support of everyone we have spoken to is the initiation of a 200-level course in the use of statistical software. Students taking our upper division courses have to make extensive use of statistical programs like SAS, JMP, Splus and MINITAB - introducing these into our courses has been stressful for both faculty and students! This new course which we are developing now will try to remedy this problem.

IHRE: a new research catalyst

Simon Fraser University instituted the Institute for Health Research and Education to support research in this area, in spite of the lack of a medical school. Several faculty in our department have developed research programs in this area and have won major grants to pursue their research proposals. Faculty members Dean, Graham, McNeney, and associate faculty Balshaw and Spinelli are especially active in this area. The IHRE Director David R. MacLean has academic appointments in the Department of Sociology and Anthropology and the Department of Statistics and Actuarial Science.

Department Members in the News

(http://www.stat.sfu.ca/news.shtml)

After her hard work leading to her appointment as the founding chair of the new department, **Dr. Charmaine Dean** had earned some research leave. Instead of slowing her pace a little, Dr. Dean took on new responsibilities: President of the Western North America Region of the Biometrics Society, another term as Chair of the NSERC Grant Selection Committee for Statistics, membership on the Board of Directors of the US National Institute for Statistical Science, active collaboration in several large research studies, and all this as she was arranging for sabbatical leave at the Queensland Institute of Medical Research in Brisbane and the Australian National Centre for Epidemiology and Population Health in Canberra. Not surprising that Dr. Dean was promoted to Full Professor!

Dr. Michael Stephens, Dr Richard Lockhart, and our former PhD student **Dr. Gemai Chen** had the honour of presenting a "Read Paper" for the Canadian Journal of Statistics at the Centre de Recherches Mathématiques in Montreal. Eminent Discussants at the event included Kjell Doksum, University of California at Berkeley, Richard A. Johnson, University of Wisconsin-Madison, Peter M. Hooper, University of Alberta, Peter J. McCullagh, University of Chicago, and Nancy Reid, University of Toronto. The event advertized to the international community the high status of the SFU statistics group.

Dr. Rick Routledge received the Murray A. Newman Award from the Vancouver Aquarium Marine Science Centre - this was for work in collaborating with the BC fishing industry on developing improved practices.

Dr. Randy Sitter was elected a fellow of the American Statistical Association. His citation reads "Randy Sitter, Professor of Statistics, Simon Fraser University. For contributions to sample survey methodology and the design and analysis of industrial experiments". The designation of Fellow has been a superlative honor in the society for 87 years. The Fellows were awarded at a ceremony at the Association's 162nd annual Joint Statistical Meetings, August 11-15, 2002, in New York City. Each year, the Committee on Fellows can only elect one-third of one percent of the total membership. This year, ASA received 91 nominations, from which 48 members were selected. A complete list of Fellows honored at the 2002 meetings is found on the ASA web site (www.amstat.org).

Dr. Julia Wirch, a faculty member of Actuarial Science, left SFU to accept a position at Heriot-Watt university in Scotland - we are working hard to replace her and adding to our strength in this area to maintain our recent growth.

Dr. Richard Lockhart received the 2002 Service Award of the Statistical Society of Canada. The citation was as follows: "To Richard A. Lockhart for long and outstanding service to the SSC and the statistical community, for creativity and energy as editor of Liaison, for innovative leadership as President of the SSC, for outstanding work as ambassador for the SSC, and for exceptional and longstanding editorial work." Richard has provided distinguished service to the SSC and the statistical profession over many years and in many ways. He served energetically and

effectively as President-Elect, President and Past-President of the Society in 1996 to 1998. He has also given outstanding editorial service to the Society as Editor of Liaison from 1988 to 1991, as Associate Editor of the Canadian Journal of Statistics from 1989-2000. Since 2001, he has been serving as Editor of the CJS. He has also been very active in many committees of the SSC including the Bilingualism Committee and the Statistical Education Committee.

Crystal Linkletter was awarded ASA/EIA Research Fellow The American Statistical Association and the Energy Information Administration of the US Department of Energy offer a Research Fellows Program to foster collaboration and interdisciplinary research efforts in the development of methodology relevant to the EIA. Crystal is working on the "Development of Estimation Methodology for Natural Gas Production". Traditionally, the reporting of monthly natural gas production by the States to the EIA suffers from a reporting lag of several months. There is a need for earlier and improved estimates of the final total. By looking at a subset of the historical data, there are several modelling strategies that can be explored.

Grace Chiu (PhD, 2002) won the International Biometric Society Western North-American Region (WNAR) Student Paper Award. The paper was delivered at the WNAR meeting earlier this year in Los Angeles. Grace's paper was titled `Using the Bent Cable to Assess an Abrupt Change in Species Abundance and Other Phenomena'. It was based upon her thesis recently defended in our department; supervisors were Rick Routledge and Richard Lockhart. Grace's thesis can be used in many practical situations. For example, one application of her work was in examining if the decline in sockeye abundance was gradual or abrupt.

Derek Bingham (PhD, 1999) was co-chair of the Spring Research Conference on Statistics in Industry and Technology at the University of Michigan, May 2002.

Jason Loeppky (MSc, 2000) has a paper based on his M.Sc thesis appearing in the July issue of the Journal of Quality Technology.

Anthony Brough (BSc. 2002) starts work in Toronto with actuarial consulting firm Towers Perrin, using insurance and financial data to help predict future employee-benefits needs for its corporate clients.

Cedric Chan (BSc, 2002)**,** an A+ SFU actuarial science student, is heading south this fall to do a master's degree in financial mathematics at California's prestigious Stanford University. Chan is the recipient of this year's $2,000 Watson Wyatt & Company scholarship for the top actuarial student.

We are very interested in the accomplishments of our alumni. Please drop us a line!

Statistical Diversions

A little brain teaser to get the old noodles working after holidays.
Answers later in the newsletter - don't peek!

1. For any two positive numbers, their geometric mean is what function of their arithmetic and harmonic means?

2. A standard normal distribution is to be drawn accurately to scale on paper so that the curve will be 1 mm above the horizontal axis at z = 6. How high will the curve be above the horizontal axis at the mode?

3. In 1935 a botanist, Dr Edgar Anderson, wrote an article about a particular kind of flower. A year later his botanical measurements were used by R.A. Fisher to illustrate the newly developed technique of discriminant analysis.
(i) What was the kind of flower?
(ii) In which country were these data collected?
(iii) Which two species of this flower gave Fisher his data?

4. Though he contributed so much to probability, Jakob/James/Jacques Bernoulli or Bernouilli in the end requested (and got) a mathematical figure engraved on his tombstone. What is the figure? And in which country is the tombstone?

5. The man who called himself "Student" was, of course, W.S. Gosset.

(i) What was his day job when he worked out the density of the t-distribution?
(ii) Why did he publish his famous result on the t-distribution (in 1908) under a pseudonym?

Statistics makes the New York Times

An interesting article appeared in the New York Times August 11, 2002 entitled "The Odds of That" By Lisa Belkin. It discusses the nature of coincidence and the tendency most people have to ascribe meaning to them even when there is no scientific reason to do so. The full article is at http://query.nytimes.com/search/abstract?res=F30E14F6385F0C728DDDA10894DA404482

In fact a search of the web site www.nytimes.com for words like "odds" and "coincidence" turn up many interesting articles.

Renovations to the Department

With the formation of our new Department, physical renovations were also made in our space. The general office is in Room 10545 on the 10,000 level of the Shrum Science Centre and occupies the space of two former faculty offices. The faculty members have migrated to the eastern section of the 10,000 level of the Math & Stat Floor and the old library has been reborn from a computing machine room to a small meeting area and lounge. Graduate students are still on the 9000 level as our stat workshops. The stat workshops were recently upgraded with new computing equipment - replacing the obsolete machines that frustrated students. In the short term, we will be under a bit of a space-crunch, but this is expected to ease with the construction of a new science and technology building on campus.

Statistical Consulting Service Goes Online

As an experiment, we are test driving a service whereby you can send us a message on statistical methodology or consulting and we will try to give a quick and dirty answer to your problem. Normally, this service is restricted to members of the Simon Fraser University community. Queries from outside of SFU may be answered on a 'time available' basis. Advice is available to anyone on a 'fee-for-service basis'.

Please note that the goal of this service is to provide some practical advice for nonstatisticians. As an online service, it is not feasible for us to attempt to answer questions that would take more than a few minutes of our time. The general idea behind the service is to help nonstatisticians get some simple answers to some of the more basic questions. After a time we will be putting together a FAQ file of frequently asked questions.

We are also interested in hearing any suggestions you might have for improving this service. To kick the tires on this service, go to www.stat.sfu.ca/drstats.html. The home page for the service, explaining the face-to-face operations, is www.stat.sfu.ca/statsconsulting.html.

Management and Systems Science

We share with the Mathematics Department the responsibility for coordinating the Management and Systems Science undergraduate program. We have a two-year turn at this starting in Fall 2002. This undergraduate major/honor program combines core courses in Mathematics, Statistics, Computing Science, Business and Economics to produce a sort of generalist-specialist in Information Technology. This elite program has been rather small for many years but seems to be becoming more popular now. The seminar designed for MSSC students used to have enrolemnts of 5-10 but this term has 18. Any questions about this should be directed to Dr Larry Weldon (weldon@sfu.ca 604-291-3667), the current Co-ordinator of the program.

Obituary: Cesareo Villegas

Cesareo Villegas, 1921-2001.

Cesareo Villegas, Professor Emeritus in the Department of Statistics and Actuarial Science at Simon Fraser University passed away on July 8/2001 at 80 years of age. He is survived in Canada by his wife Nellie, four children and four grandchildren, and in Uruguay by three brothers and two sisters.

Professor Villegas received the Ing Ind degree in Engineering from the U. de la Republica in Uruguay in 1953. After 20 years in faculty positions at U. de la Republica, he came to North America as a visiting Associate Professor at the University of Rochester (1968 to 1970). He joined Simon Fraser University in 1970 as an Associate Professor and was the founding statistician. From 1979 until his retirement in 1986, he served as Full Professor.

Cesareo Villegas was an expert in the foundations of Bayesian statistics, beginning his work in the days when Bayesian methods were not so fashionable. He was one of the original handful of pioneers who participated in the now wildly popular Valencia meetings that promote the Bayesian point of view.

His publications were theoretical and included amongst others, eight papers in the Annals and three in JASA. Some of his best known work involved the development of priors satisfying certain invariance properties.

Although his published work was characterized by mathematics, and in particular algebra and probability theory, Cesareo had an interest in applications. One topic which caught his fancy for a sustained period involved the possible relationship between river flows and sunspots. Professor Villegas was a scholar; he read widely, he thought long and deeply and he wrote quality papers. He was active in his retirement and maintained an NSERC grant up until the year of his death.

Cesareo was a gentle man who lived his life with dignity. Although quiet in nature, he could become animated when engaged in almost any topic, spiritual or scientific. He was generous with his time to young investigators and when it was clear that he was unable to spend his grant in 2001, he used the balance to support graduate students at SFU. He was a role model who demonstrated how to love and how to attend consistently to one's work without being overly distracted by the politics of academia. His priorities in life were firmly established, and in increasing order of importance, these included statistics, his family and his faith.

Cesareo had a slow growing prostate cancer for a number of years. The last three months he was hospitalized and was further diagnosed with a brain tumour. He lived his last months and days pain free.

He is deeply missed.

Respectfully submitted,

Tim Swartz and Michael Stephens
Department of Statistics and Actuarial Science

Answers to Statistical Diversions

1. GM(a, b) = geometric mean of {AM(a, b), HM(a, b)}, provided that a>0, b>0

2. The surprising answer is about 65.7 kilometers.

3. The flower was the iris, the data were collected in Canada, the two species were Iris Setosa and Iris Versicolor. For those seeking additional information:

Anderson's paper is:
E. Anderson, The irises of the Gaspé Peninsula. Bull. Amer. Iris Soc., 59, 1935, 2-5.

Fisher first used Anderson's data in:
R.A. Fisher, The use of multiple measurements in taxonomic problems. Annals of Eugenics, 7, Part II, 1936, 179-188.

The iris data are reproduced with commentary in: D.F. Andrews and A.M. Herzberg, Data - A Collection of Problems From Many Fields for the Student and Research Worker. Springer, 1985.]

4. Bernoulli has an Archimedean spiral engraved on his tombstone in Basel, Switzerland, though he wanted a logarithmic (or equiangular) spiral, a curve whose properties he had studied. See F.N. David, Games, Gods and Gambling. Griffin, 1962, page 138. In polar co-ordinates, the Archimedean spiral is $r = aq$, while the logarithmic spiral is $r = e^{aq}$

5. In 1905 Gosset held the high-status position of Brewer with the Guinness Brewery in Dublin. The Board of Guinness did not generally permit its Brewers to publish scientific work, because this would have been identifiable with their employment at Guinness, and thus might have advantaged Guinness' competitors. After much discussion, the Board agreed to make an exception for Gosset, provided that he published under a pseudonym. Thus, from 1905 until his death in 1937 Gosset published his papers as Student. 'On the probable error of the mean' in Biometrika, 6, 1908, 1-25 was one of the earliest of these papers. On the background to Gosset's interactions with the Guinness Board, see Joan Box, 'Guinness, Gosset, Fisher and small samples'. Statistical Science, 2, 1987, 45-52.] And we have a Vancouver connection as well. This firm built the Lions Gate bridge to North Vancouver to link their property developments to the downtown area.

Annual Departmental Award Ceremony

May 2002

Every year the Department is pleases to honor its members for achievements over the last years. This year the ceremony was held in May 2002 in the Halpern Center.

This year the Department was pleased to start a new award funded from the Endowment Funds. This recognizes excellent achievement in Major and Honors programs.

Graduate Awards

NSERC Post-graduate Scholarships,
2001-2002:
Davide Beaudoin,
Jason Loeppky
Jason Nielsen.
2002-2003:
Simon Bonner
Crystal Linkletter.

NSERC Industrial Postgraduate Scholarship:
Laura Cowen (2001-2003).

Special Graduate Entrance Scholarship
David Beaudoin,
Simon Bonner,
Jacqueline Gregory
Jason Nielsen.

PhD Graduate Fellowship 02-3
Farouk Nathoo.

MSc Graduate Fellowships
2001-3 Yiqing Li
2002-1 Crystal Linkletter
Michael Lo.
2002-2 Simon Bonner.

Undergraduate Awards

Undergraduate Open Scholarships:
Tsun Y. Joseph Kwok (01-1,01-2,01-3).
Julia Lin (01-2,01-3,02-1).
Andrew Loach (01-1,01-3,02-1)
Kawang James Wong (02-1)
Clement K. Wu (01-2, 01-3, 02-1)
Henry Yuen (02-1).

University Women's Club of Vancouver Award:
Wei Zhang

Watson-Wyatt & Company Scholarship in Actuarial Science:
Tsun Yin Joseph Kwok

Statistics and Actuarial Science Endowment Award for excellent achievement in the Majors and Honors programs.
Actuarial Science:
Kwang James Wong, Andrew Loach.
Statistics:
Alex Kwan
Darcy Pikard.

SFU Alumni Scholarship: Wei Zhang.

R. Bruce Coles Memorial Scholarship:
Tsun Yin Joseph Kwok
Dong Chen

New Alumni

The Department is pleased to welcome the following students to our alumni.

Graduate Students

Term	Student	Degree	Thesis	Supervisor
2002-2	Joy, R.	M.Sc.	Assessing infilling methods for missing data in spawning salmon estimates.	R. Routledge
2002-2	Chiu, G.	Ph.D.	Bent-Cable Regression for Assessing Abruptness of Change	R. Lockhart, R. Routledge
2002-1	Fernandez-Martinez, M.	M.Sc.	Hedging Financial Instruments to Control Risk When Accumulating a Pension Fund	J. Wirch
2001-3	Khandwala, F.	M.Sc.	Increasing the Efficiency of Subregion Adaptive Quadrature Algorithms.	T. Swartz

Undergraduate Major and Honor Graduands

June	2002	B.Sc/AcSc	Brough, A.
		B.Sc/Stat	Cheung, E.
		B.Sc/AcSc	De Castro, J.
		B.Sc/AcSc	Dhala, A.
		B.Sc/Stat	Fukui-Innes, J.
		B.Sc/Stat	Fung, W.
		B.Sc/AcSc	Kupskay, R.
		B.Sc/Stat	Lau, A.
		B.Sc/AcSc	Leung, S.
		B.Sc/Stat	Ling, C.
		B.Sc/AcSc	Mawani, S.
		B.Sc/Stat	Pickard, D.
		B.Sc/AcSc	Tan, W.
		B.Sc/Stat	Wong, S.
October	2001	B.Sc/Stat	Lee, C. K.
		B.Sc/AcSc	Winski, M.
		B.Sc/Stat	Wong, H. Y. R.
		B.Sc/Stat	Yu, S.-T.
		B.Sc/Stat	Tong, M. K.

Endowment Fund News

We have a small endowment fund transferred to us during the split of the former department of Mathematics and Statistics. This fund helps to encourage and reward the best students of statistics and actuarial science. This kind of award adds prestige to our department and is an additional way that we can attract good students to our discipline.

As noted earlier in the newsletter, four awards were made to senior undergraduate students in the last award ceremony. Alex Kwan, Andrew Loach, Darcy Pickard, and Kwang James Wong were honored for their high achievements in the major/honors program.

Because of the financial success of the 2001 SSC meetings held at SFU, the Statistical Society of Canada has decided to endow a scholarship at SFU. More details in future newsletters.

The endowment fund needs help to grow. If you are willing to contribute to this fund, please contact the department at 604-291-3803. Contributions of any size would be sincerely appreciated and of course are tax deductible.

For further info about the department, see the web page www.stat.sfu.ca/.

The last word

This newsletter has been prepared from contributions by all faculty and staff of the department, and edited by Larry Weldon. We are pleased to hear from our current members and our alumni. Please send comments to weldon@sfu.ca. Contributions to the endowment fund may be sent to the Department.

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