

MATHEMATICAL SCIENCES NEWSLETTER

September 2000 Issue
Editor: G. Ludwig

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Editor's comments: This is the first of this year's departmental newsletters. To make these a success, the editor relies on being supplied by its readers with newsworthy items of current interest in this department. Please send any correspondence for future issues to gludwig@gpu.srv.ualberta.ca, with "Newsletter" in the subject line.

1. CHAIR'S REPORT TO THE DEPARTMENT

Akbar Rhemtulla

Welcome to the new academic year!

If there is one thing that stood out last year, it was the fabulous cooperation I have received from faculty, support staff and students. I asked many of you to do chores for the department and the response, in every case, was positive. The results were great and included, amongst other things, more nominations for individual awards, equipment grant from NSERC, reduction in library cuts and more funding from Graduate Faculty.

A department's reputation is judged by the quality of faculty members. I am lucky that this department's prestige is on an upward trend. But it is always a constant struggle. I would like to see special attention paid to the following areas in the coming year.

1. Recruitment of students (undergraduate and graduate level) into MathSci programs. This involves attack on many fronts, from educational out reach projects, and aggressive recruitment initiatives to improvement of teaching and design and implementation of relevant programs.

2. Raising departmental profile by playing a larger role in the national and international math/stat community, encouraging increasing collaboration with industry and government agencies and providing even better research environment. I am very happy to report that this year we have representations on all three Math/Stat Grant Selection Committees of NSERC.

ACADEMIC ACTIVITIES:

In addition to an increased number of colloquium talks and weekly seminars in a number of areas we saw many more graduate student activities in all areas of mathematics and statistics last year. There was the Fluids Workshop in July that will now become an annual event. We also had a major conference in Biostatistics

in June and four week long Algebra 2000 workshop/conferences in June/July. Let us have more activities this year.

Student registrations are as follows (estimates):

Honors: 17 first year (how many will stay with us?)
and 15 total for yrs. 2,3 and 4.

Specialization: The total this year is 89 - over 20 more than last year.

Graduate students: 84 last year; 82 this year.

Postdocs: 10 last year; 19 this year.

We also have a record number of visitors, research associates and sessionals.

APPOINTMENTS:

Five academic appointments were made starting this year. They are Michael Li (ODE), Ivan Mizera (Statistics), Bin Han (Wavelet Analysis), Eric Woolgar (FSO), Henrijk Kolacz (FSO). In addition Mark Lewis will join us in July 2001 if he gets the Century 21 Chair that the University is nominating him for on behalf of MathSci and BioSci Departments. Dr. Erik Talvila has joined the teaching Faculty for a three-year period.

At present we have four Faculty Lecturers. They are Dragos Hrimiuc (1998), Elizabeth Leonard(1999), Giseon Heo(1999) and Enver Osmanagic(2000). The number in brackets refers to the year of first appointment.

The ad has gone out for a position in Mathematical Finance (to fill the position that Guo did not take up) and in Actuarial Science that we could fill last year. We are presently interviewing candidates for the APO position.

Other positions to be filled are those due to retirements of Sudarshan Sehgal and Doug Kelker (who retired as of July 1, 2000 and is presently on a two year half time position). We also have one Access position. It is not yet clear whether we will be allowed to fill these positions by July 1, 2001. Dick Peter has indicated that the next Chair be given this task.

In the support staff category, Marvin joined us last year. He is our Windows Technician.

Charlotte and Sandra joined us in August 1999 and Dana joined the department as of May 1, 2000.

CANADA CHAIRS:

Nicole has been nominated for a senior Chair. The position starts January 1, 2001 if it is approved by NSERC. We also hope that Mark Lewis will be nominated for a similar Chair to take effect on July 1, 2001. These appointments have implications that I will explain in the next newsletter.

SPACE:

While we have been allocated the space on 4th floor of CAB that will be vacated by Computing Science Department, the timing is not clear. We hope the space will begin to be available to us starting January 2001.

NEWS FROM PIMS, AMI and STATISTICS CENTER:

There is a lot of news from these institutes, but the respective directors will cover them.

AHFSER and iCORE:

These are two creations of the Government of Alberta to fund research in science and technology. The department should take advantage of funding from these agencies and also from PIMS, Fields and CRM. Nassif Ghousoub tells me that with these sources for funds our department should become the powerhouse that Toronto is today. How do we achieve this given that iCORE and AHFSER grants come with strings attached to them? So far we have not been able to tap into AHFSER and iCORE, and we will need to develop a strategy to obtain our share of funding.

UNDERGRADUATE RECRUITMENT:

We have started the Entrance Scholarships Program - up to six awards of \$1,000 to be given to students entering the Honors or Specialization Program in MathSci. This year we have collected \$2,000 and the Dean will match that so we have \$4,000 to give out to four students this year. The awards stress mathematical abilities of applicants as opposed to over-all grades.

We are going ahead with the program of specialization in Computational Mathematics which will enable students to take core Math/Stat and Computing Science courses and leave a lot of room for various applications. The program has received approval from the university.

Ted Lewis, with funding from PIMS, will spearhead efforts to reach high school kids to attract them into the mathematical science department. PIMS has also undertaken to support the publication "Pi in the Sky".

We are in the process of upgrading the department network, servers and computer terminals using the \$103,000 awarded by NSERC and additional funding from the Faculty of Science.

2. REPORT FROM GRADUATE STUDIES

Jim Muldowney

The most exciting events in the graduate year are the arrival of new students from all over the world, the recognition gained by our students who win awards and scholarships and the successful completion of their programs by our masters and doctoral students.

New Graduate Students:

Olusegun Adebayo comes to us from Nigeria where he completed his B.Sc. at University of Lagos. His academic advisor is Abel Cadenillas in preparation for M.Sc. studies in Mathematical Finance.

David Ballantyne is a U of A graduate in mathematics and computing science. He is in the M.Sc. program in Pure Mathematics and an academic advisee of Mike Kouritzin.

James Dalby is also a U of A alumnus (B.Sc.) with a M.S. from Florida State and a Ph.D. from Melbourne. He is here to complete a Postgrad Diploma with Subhash Lele. His academic advisor is Peter Hooper.

Tao Ding, with a B.Sc. from Jiao Tong University is here for a master's program in Statistics and is being advised by Rohan Karunamuni.

Mark Goldenberg who studied at Saratov State University in Russia and at the U of A is here to work on a M.Sc. with Andy Liu.

Selly Kane is also being advised by Abel Cadenillas in preparation for Ph.D. studies in Mathematical Finance. She has her Licence from Univ. de Paris VII and master's from Univ. de Paris DEA.

Kwadwo Kwarteng, with a B.Sc. from Univ. of Cape Coast, Ghana, will work on his M.Sc. in Statistics. His academic advisor is Byron Schmuland.

Damon Mayes, with B.Sc. and M.Sc. from U of A is being advised by Peter Hooper in preparation for a Ph.D. in Statistics.

Grady Mydlak is here to work on a M.Sc. degree. His advisor is Mazi Shirvani. His B.Sc. is from Univ. College of the Cariboo in Kamloops.

Asubonteng Owusu has a B.Sc. from the Univ. of Science and Tech. in Ghana. He is being advised by Robert Elliott in preparation for his M.Sc in Mathematical Finance.

Andrew Roberts comes to us from Queen's University where he studied for his B.Sc. degree. He will work on his M.Sc. in Differential Equations here and is Robert Elliott's advisee.

Amrit Shrestha studied at Tribhuvan Univ. in Nepal and University of Oslo in Norway, is advised by N. Prasad in preparation for a Ph.D. in Biostatistics.

Cynthia Yau is a U of A graduate and also Prasad's advisee for her work on a M.Sc. in Biostatistics.

Huamei Yin has a B.Sc. from Nanjing Institute of Meteorology, a M.Sc. from the Chinese Academy of Meteorological Sciences and will work on a Ph.D. in Fluid Dynamics/Statistical Climatology. Sam Shen is her academic advisor.

1999-00 Graduate Awards:

Congratulations to the following graduate students for awards received in the past year

Pundit RD Sharma Memorial Graduate Award

Cristina Popescu (Applied Math)

No award (Pure Math)

Enhua Yang (Biostatistics)

NSERC PGS B

Kathleen Dohan

iCORE Graduate Student Fellowship

Kathleen Dohan

Masky Ng

NSERC PDF

Gregory Lee

Graduate Student Teaching Awards

Brenda Hawkins

Enver Osmanagic

Ross Stokke

Province of Alberta Graduate Fellowship

Mateusz Reszka

Ross Stokke

Liping Liu

Izaak Walton Killam Memorial Scholarship

Razvan Anisca

Rong Huang

Eoin L. Whitney Scholarship

Irina Dinu

Lynn Dover

Cristina Popescu

Graduate Programs Completed (May 1/00 - Aug. 31/00)

Eshetu Atenafu completed his M.Sc. in Statistics under the supervision of Edit Gombay. He has commenced Ph.D. studies in Biostatistics at Univ. of Toronto.

Daniele Cereda has returned to Italy following completion of his master's degree in Mathematical Finance under the supervision of Robert Elliott.

Lisa Corscadden completed her M.Sc. program with Gerda de Vries and has accepted a position with Stats Canada in Ottawa.

Warren Hare completed his M.Sc. with Rene Poliquin and will pursue Ph.D. studies at Simon Fraser.

Cody Hyndman was also a successful M.Sc. student of Robert Elliott in Math Finance. He has gone to Waterloo for Ph.D. studies.

Tamara Koziak has successfully completed her M.Sc. studies and was a student of Robert Elliott.

Gregory Lee is pursuing postdoctoral studies at Univ. of Wisconsin, Madison. He was awarded a NSERC Postdoctoral Fellowship on completion of his doctoral studies with Sudarshan Sehgal.

Hong Li successfully completed her M.Sc. in Statistics under the supervision of Prasad.

Fiona Lusby completed M.Sc. studies in Statistics with Peter Hooper and, at the end of August, caused wedding bells to ring with Ph.D. student Connell McCluskey. Best wishes to Fiona and Connell.

Rogemar Mamon completed his doctoral studies in Mathematical Finance with Robert Elliott. He is now an Assistant Professor in the Dept. of Statistics and Actuarial Science at Waterloo.

Rachel Quinlan is now a Lecturer at University College Dublin, Ireland, following completion of her doctoral studies in Algebra with Mazi Shirvani.

3. REPORT FROM STATISTICS

N. Prasad

The Statistics Centre welcomes the following new members:

- Professor Sharon Lohr from Arizona State University. She is here from September 1 until October 6th, 2000 and will be collaborating research work with Dr.N.G.N.Prasad
- Dr. Sanjoy Sinha will be here for a year as a Post Doctoral Fellow working with Dr. D. Wiens.

- Dr. Judee Onyskiw will be working as a Post Doctoral Fellow under MRC and AHFMR. She will be working with Dr. K.C. Carriere.

4. REPORT FROM COMPUTING

Sherwood Botsford

Upcoming changes in the math dept.

Networking:

The 6th floor has been rewired for twisted pair (similar to phone jack) networking. Testing of all the connections is delayed because CNS's gazillabuck network circuit tester is down for repair. This should be online sometime in the next two weeks.

The old thin net will not be abruptly turned off, but will no longer be maintained. When it breaks, it breaks. Due to some foresight (Blow own bugle here...) most new computers bought in the last three years have a combination card that allows them to be used on either thin net or the older coax cable. Only a few computers will need new cards. As we make the conversion, we'll install and configure new cards. The cost of the card will be charged to your grant.

More networking:

The entire department, both stat and math is converting over to 100 MB fully switched networking. This will speed up access to servers, and should make it reasonable for 6th floor x-terms to connect to 4th floor servers; 4th floor xterms to connect to 6th floor servers and so on, with reasonable speed.

Still More networking:

We're in the process of merging the math and stat physical networks. There will still be separate math and stat name spaces, but they will share a common block of addresses. For this change to take place, ALL IP addresses will be changed. For those of you who administer your own machines, you will receive an email telling you what your new network parameters are. For those of you who have windows machines, we are switching them over to an auto configuration service. When switch over day comes, all you will need to do is reboot your machine and it will reconfigure automatically. (Knock on wood...)

New servers:

Vega is being replaced. Vega is a very old (8 years, practically an antique!) It has roughly the compute power of a 100 MHz Pentium and often has been in use by a dozen people at once logged on via x-terms. (A testament to the power of unix.)

The new servers will be twin pentiums running at 800 MHz with 2 GB RAM and 120 GB of disk space. Those of you who keep running into disk quota problems will finally have some relief. Our mathematica, matlab and maple licenses will be moved to the new servers. There will probably be problems in the conversion. Best strategy is a combination of patience and email. Patience because we can't fix everything at once. Email because we can't fix it if we don't know it's broken.

The vega replacments have been ordered, and should arrive within a week to 10 days.

In addition to the vega replacement, certain services are getting their own dedicated servers. WWW, ftp, and email will have dedicated servers. We are setting up email to use secure imapd, as well as a secure webmail server. In principle, this should allow a user to read his mail from anywhere in the world, and have access to all of his filed mail and addressbooks, either by using pine, or by using a web browser.

5. REPORT FROM PIMS - UALBERTA SITE

Bryant Moodie

As you are all aware, a large portion of the local funding for PIMS comes from ASRA in the form of a four-year grant of which we are now in our 2nd year. With this funding the local PIMS personnel are energetically engaged in carrying out the mandate of ASRA by developing innovative approaches to education at all levels, creating bridges of communication between industries and the university sector thereby enhancing the educational experience of our students while at the same time bringing to bear advanced mathematical techniques on industrial problems of importance to the Albertan and the Canadian economies.

In the educational sector we have created the new mathematical magazine *Pi in the Sky*. This magazine has been designed to provide for a dialogue between academic mathematical scientists, educators, students, and the public at large. PIMS has just distributed the inaugural edition of this magazine to all high schools in Alberta and British Columbia. The idea for this magazine came from Wieslaw Krawcewicz and John Bowman and these two did the majority of the work to get this publication off the ground. We are also indebted to all those who contributed to this first issue and I would encourage all of you to consider contributions to future issues.

Activities in the industrial sector of PIMS included the publication and distribution of the Proceedings of the Third Industrial Problem Solving Workshop. These workshops which are attended by 50-60 students, 15-30 faculty members as well as representatives from six industries are extremely well-received by the students and the industrial participants. We have had feedback from industries indicating that our contribution will save them millions of dollars (Michelin Tires). PIMS has also managed what we call Industrial Collaborative Projects. These involve support from a local industry and PIMS to hire mathematically trained persons to work on problems chosen by the industry involved. Three projects were recently completed and three more are being initiated as I write this report. The completed ones involved Imperial Oil, VisionSmart, and Lockheed Martin. The researchers involved were Dr. Li (with LM), Dr. Lyder (with VS), and Mr. Van Vliet and Ms. Dohan (with IO). The new Collaborative Projects involve Dr. H. Long (Lockheed Martin), Dr. J. Mmbaga (Paprican) and Dr. W. Sun (VisionSmart).

The 2nd Annual PIMS Summer School in Fluid Dynamics was held during the summer and was attended by 26 students with core lectures being given by John Bowman, Andy Bush, Bryant Moodie, Peter Mineev, Bruce Sutherland and Gordon Swaters. The invited speakers were Paul Linden (UC San Diego), James McWilliams (UC Los Angeles), and Frans Nieuwstadt (Delft University of Technology). This PIMS-funded event is held every year and Bruce Sutherland is responsible for the concept as well as carrying the bulk of the administration.

This year the University of Alberta was most fortunate to have Stephen Donkin under the PIMS Distinguished Chair Program. Stephen was also attending the Algebra 2000 Summer School and Workshop. As a Distinguished Chair Stephen has produced a set of lecture notes based on his series of lectures and these will be posted on the PIMS Web Site towards the end of this year.

There were many more activities supported at this site by PIMS but in order to keep this report brief I shall not detail all of them now but save them for later Departmental Newsletters.

I will close by saying that PIMS is a resource that is here to stay and we should all make maximum use of it. PIMS is moving towards building permanent structures rather than funding numerous workshops etc. I will get back to you at a later date with a report about some of these structures and in particular the Kananaskis International Research Center for the Mathematical Sciences.

6. REPORT FROM AMI

Jack Macki

The AMI played a large part in obtaining support for the Pims Summer School on Fluid Dynamics. In addition, the Institute hosted more than 10 lectures by visiting scholars on topics ranging from Math of Finance to Biomedical Statistics. On July 1, Jack Macki succeeded Gordon Swaters as director. Plans for the coming year, in addition to the usual series of AMI lectures, are to host a workshop on the graduate and undergraduate applied mathematics curricula. In addition, we intend to develop a systematic program of contacting Western Canadian Industry and making them aware of our expertise. Increased collaboration with colleagues at the University of Calgary is also on the agenda. Finally, the relation of the AMI to Pims will be explored.

7. REPORT ON THE STATISTICS AND HEALTH CONFERENCE

K.C. Carriere

Edmonton Statistics Conference 2000

This conference was organized by Biostatistics Research Group and Statistics Centre, funded by various mathematical, statistical, health, health economics, and clinical research organizations. It was held during June 11-13, 2000 at the Shaw Conference Centre and the Central Academic Building. The participants totalled 281 from over 12 countries. The conference created a forum to discuss how much opportunity we statisticians have in Canada, especially, in the areas of health policy and related areas. The conference promoted close interaction between health scientists and statisticians, demonstrating wide opportunities available to statisticians.

The workshop was also a huge success, where the main objective was to educate analysts about statistical modeling techniques. Currently, we statisticians have a deep concern in the fact that anyone can do statistical analyses due to widely available inexpensive statistical software, but most of them are not trained to know the differences among various methods and do not know the statistical assumptions required for conducting scientific research that paints policies governing all of us.. Such analyses have been done blindly without proper training available to the analysts. Much of the workshop attentants were from Canadian health and medical organizations, including Alberta Health and Wellness. As their analysis results get implemented

almost immediately into formulating health policies impacting our lives directly, it was great to see that the core analysts get proper training so that they can submit well-informed recommendations to our policy makers.

Everyone who participated enjoyed the time in Edmonton. Some feedbacks about our conference and the workshop is found at www.stat.ualberta.ca/~brg/conf.html.

8. REPORT ON THE FLUID DYNAMICS SUMMER SCHOOL

Bruce Sutherland

The Second Annual PIMS Fluid Dynamics Summer School ran from July 30 to August 11, 2000. In this two week long workshop, students from around the world gathered at the University of Alberta. Most participants were graduate students in the early stages of their research programs. The students attended a series of advanced lectures taught by specialists at the university and three invited lecturers: P. F. Linden (University of California, San Diego), J. C. McWilliams (University of California, Los Angeles) and F. T. W. Nieuwstadt (Delft University). Each day the participants were given hands-on experience running research-level numerical codes and they performed laboratory experiments. Both the simulations and experiments were designed to complement the lectures and so help students develop an intuition for fluid dynamics phenomena, how they are mathematically modelled, and how reliable approximate solutions can be.

The school was a great success. Only two other institutions in the world run an annual summer school in fluid dynamics: University of Cambridge and Woods Hole Oceanographic Institution. The feedback from students who had also attended these other workshops said that the PIMS Fluid Dynamics Summer School was most interesting because of its emphasis on modern experimental and numerical methods as well as the high quality of lectures.

The PIMS Fluid Dynamics Summer School is an annual event sponsored by the Pacific Institute for the Mathematical Sciences, with additional support from the Institute for Geophysical Research, the Applied Mathematics Institute and the Environmental and Industrial Fluid Dynamics Laboratory. Next year it will be held from May 26 to June 8, immediately before the PIMS sponsored conference “Wave Phenomena III”.

Summer school information is available on the web at fdss.math.ualberta.ca/.

9. REPORT ON MATH WEEK

Bruce Sutherland, John Bowman, Gerda de Vries, Terry Gannon,
Georg Peschke

Members from our department participated in MATH WEEK, run by Glenora School from May 15 to 19. The interactive lectures were given to students in grades 1-6 on such subjects such as “Euler’s formula”, “computer security and ‘the Price is Right’”, “muchos numeros”, “waves and vortices”, and “hyperspace”. Representatives from our department included John Bowman, Gerda de Vries, Terry Gannon, George Peschke, Bruce Sutherland and a graduate student, Oksana Kotovych. Math Week was organised locally by Barbara Husband, an “enthusiastic parent” at Glenora, with the assistance of Michael Caley of the Science Hotline. Their efforts and the efforts of all those who give their time to visit schools are appreciated. By these visits, young minds may realise the beauty of mathematics in and of itself, and they they may grow to appreciate how mathematics permeates so much of our technological society. We hope that through continued exposure we will eventually see the students again when they enrol in our university classes.

Sample contributions from some of the lecturers:

John Bowman introduced Grade 1 to 3 students to probability. The students did statistical trials (with candy!) based on the game “To Switch or Not to Switch.” This game is described on the General Multimedia Resource under the URL

<http://www.ualberta.ca/MATH/gauss/fcm/BscIdeas/probability/swtchornt.htm>

The game analysis leads to a nonintuitive conclusion, and it caused the students (and teachers!) to think intensely about the odds of winning. One of the volunteer parents who helped organize the event wrote us afterwards to say,

”everyone at the school was impressed with the participation by the U of A folks. Tonight our son (grade 3) tried to explain probability theory to his dad! John would have got a kick out of it.”

Gerda deVries gave a presentation on polyhedra to the Grade 4, 5, and 6 classes. Students worked in groups counting the number of edges, faces, and vertices on a collection of Platonic and Euclidean solids. The students entered their answers into a table written on the blackboard, and then “discovered” Euler’s Formula relating the number of edges, faces, and vertices. In each class, there were several students who independently discovered the formula, and they were much admired by their classmates.

Terry Gannon: I spoke about large numbers. It’s hard to believe that an hour can be spent chatting about large numbers, but surprisingly the students seemed

amused – e.g. they kept running up to me every few minutes with even more pages filled with 0's, asking me if they'd succeeded yet in writing down a googolplex! I concluded the grade 6 talk with one of the gems of elementary math, namely $0.9999\dots=1$, and they seemed to understand it (something which I can't say about one of my junior high math teachers...)

Georg Peschke provided emulated ideas from E.A. Abbott's "Flatland" to provide a multispace experience in which concepts like a prison in a 2-dimensional world ("... but what if FlatThug has an eraser?") and hyperspace were explored.

10. REPORT ON THE ESSO-CMS MATH CAMP

Ted Lewis

As part of Math Year 2000, Esso and CMS sponsored a variety of Math Camps across Canada. This summer, the Alberta Math Camp was held at the U of A. As well as Esso and CMS, the camp was sponsored by PIMS, the Mathematics Council of the Alberta Teachers Association, the Edmonton Public School Board, and by our Faculty of Science (which in fact was the major sponsor).

A total of 27 students attended, with 24 housed in Lister Hall, and the remainder attending as day-students. The students came from grade 6 through grade 10, and attendance was by invitation only.

The camp was organized by Ted Lewis and Andy Liu. The major component of the camp was the daily morning workshops which were conducted by John Bowman, Gerda de Vries, Terry Gannon, Dragos Hrimiuc, Peter Minev, and Byron Schmuland. Giseon Heo and Gustavo Carrero provided additional help with the workshops. Andy organized the evening problem and puzzle sessions. Gilbert Lee, a computing science student and former prize winner of the Alberta High School Mathematics Competition, provided much assistance, both as a house parent and as a source of help for any math questions that the students had.

The camp was very successful, and the students were very enthusiastic. With the aid of Gilbert Lee, following the camp they set up a website so they could exchange answers to the problems from Andy's translation of the Hungarian Problem book. Andy gave them 200 problems, and they have so far solved over 50 of them. We are looking forward to seeing some of them attend the University of Alberta in the near future.

11. NEW SPECIALIZATION PROGRAM

Gerald Cliff

Our department has a new Specialization program. It's officially called Specialization in Computational Science (Mathematics) and is essentially a joint specialization program in Mathematical Science and Computing Science, administered by the Mathematical Sciences Department. Similar versions of this program were approved by our department several times over the last few years, but did not get Faculty of Science or GFC approval until this past June.

This program should be of interest to students interested in mathematics or statistics who are also interested in computing, as well as to students wishing to study Computing Science who want a solid grounding in Mathematical Science. Students will be admitted to this program for the Fall 2001 term; you can inform interested undergraduates in your courses about this.

12. COLLOQUIUM

The colloquium in the Department of Mathematical Sciences takes place in CAB 657 on Thursdays at 3:30 p.m. Please contact H. Brungs (CAB 571)

e mail: hbrungs@math.ualberta.ca

or Dana in the main office (CAB 632) with your suggestions for speakers who will tell us new and exciting things that are happening in the mathematical sciences.

13. APPOINTMENTS

Academic Staff:

The Department welcomes a number of new faculty members.

- **Bin Han**, whose field is Wavelet Analysis, is a former Ph.D. student of R.Q.Jia. Until recently, he held an NSERC post-doctoral fellowship at Princeton University.
- **Michael Li**, whose field is Ordinary Differential Equations, is a former Ph.D. student of Jim Muldowney. He has spent the last few years in the United States, most recently as Assistant Professor at Mississippi State University.

- **Ivan Mizera**, whose field is Statistics, comes to us from Bratislava, Slovakia. He should be arriving the week of September 11.

FSOs and APOs:

- **Henrijk Kolacz** and **Eric Woolgar** have been given academic appointments as FSOs.
- Interviews for the APO position are under way.

Postdoctoral Fellows:

- **I. Bucataru** is a PIMS Postdoctoral Fellow working with Peter Antonelli
- **Yuming Chen** is a Killam Postdoctoral Fellow working with Jim Muldowney
- **S. Clark** is a Postdoctoral Fellow working with Robert Elliott
- **G. Escarela - Perez** is a Postdoctoral Fellow working with Jacques Carrière
- **B. Klopsch** is a PIMS Postdoctoral Fellow working with Akbar Rhemtulla
- **H. Long** is a MITACS Postdoctoral Fellow working with Michael Kouritzin
- **M. Mei** is a Postdoctoral Fellow working with Sam Shen and Joe So
- **M. Pi** is a Postdoctoral Fellow working with Robert Tait and Yaushu Wong
- **J. Onyskiw** is a Postdoctoral Fellow
- **S. Sinha** is a Postdoctoral Fellow working with Doug Wiens
- **D. Stanley** is a Postdoctoral Fellow working with T. J. Gannon
- **W. Sun** is a Postdoctoral Fellow working with Byron Schmuland
- **S. Surya** is a PIMS Postdoctoral Fellow working with Eric Woolgar

14. NOMINATIONS

- **Nicole Tomczak - Jaegermann** has been nominated for a Canada Research Chair.
- **Mark Lewis**, presently in Utah, will also be nominated for a Canada Research Chair. His appointment will be a joint one with Biological Sciences.

These nominations have possible implications. If the candidates succeed, the University is obliged to build up their areas by appointing a junior person at the Assistant Professor level.

15. DISTINGUISHED VISITOR

Professor **Raymond Smullyan** visited from September 6 to 13. During this period he gave three talks:

- Logic and Infinity, on September 7, to the University community at large,
- From Paradox to Truth, on September 11, to school teachers and students,
- Logical Legerdemain, on September 12, to philosophers, mathematicians, and computing scientists.

16. VISITORS

The Department has been, currently is, or will be host to the following visitors:

- **H. Azari**, a graduate student hosted by Yanping Lin, is visiting from May 1 to November 30.
- **G. Barone-Adesi**, hosted by Robert Elliott, is visiting from September 23 to September 28.
- **D. Blount**, hosted by Michael Kouritzin, is visiting from September 1 to October 7.
- **A. Budhiraja**, hosted by Michael Kouritzin, will be visiting from March 1 to March 31, 2001.
- **Weixin Chen**, hosted by R.Q. Jia, will be visiting from May 1 to August 31, 2001.
- **G. Dales**, hosted by Tony Lau, will be visiting from October 23 to November 8.
- **H. Dikshit**, hosted by A. Sharma, is visiting from September 2 to October 25.
- **J. Graeter**, hosted by Hans Brungs, was visiting from July 18 to August 20.
- **T. Hogan**, hosted by R.Q. Jia, was visiting from August 22 to August 29.
- **A. Jakimovski**, hosted by A. Sharma, was visiting from July 1 to August 31.
- **E. Kaniuth**, hosted by Tony Lau, will be visiting from October 5 to October 12.

- **A. K. Kushpel**, hosted by Zev Ditzian, is visiting from August 8 to January 31.
- **A. Lichtman**, hosted by Mazi Shirvani, is visiting from September 14 to September 17.
- **S. Lohr**, hosted by N.G. Prasad, is visiting from September 1 to October 15.
- **P. Malcolm**, hosted by Robert Elliott, will be visiting from October 28 to November 30.
- **J. Mallet - Paret**, hosted by Walter Allegretto and Jack Macki, was visiting from August 1 to August 31.
- **P-E. Parent**, hosted by Georg Peschke, will be visiting from October 9 to October 23.
- **E.S. Rao**, hosted by Robert Moody, is visiting from September 17 to September 24.
- **J. Ritter**, hosted by Al Weiss, will be visiting from September 25 to December 10.
- **R. Smullyan**, a Distinguished Visitor, hosted by Andy Liu, was here from September 7 to September 12.
- **B. Zhao**, hosted by Sam Shen, is visiting from September 15 to November 4.
- **Y. Zhou**, hosted by R.Q. Jia, was visiting from August 22 to August 29.

17. ANNOUNCEMENTS

**INFORMATION SESSION BY STATISTICS CANADA, CAB 657,
Monday, September 18 at 4:00 p.m. (as per e-mail from Denise Hall)**

This information session will provide details about the employment and career opportunities offered by Statistics Canada to mathematical-statisticians. The session will be held on September 18 at 4:00pm in room 657 of the CAB, and will be approximately one hour in length, including time for questions at the end. Please ask the faculty in your department to mention the information session during their statistics classes.

I would like to take this opportunity to stress the importance of the Statistics Canada's annual Post-Secondary Recruitment Campaign, especially for mathematical-statisticians (MA group). The annual fall Post-Secondary Recruitment Campaign is our primary source of new mathematical-statisticians. In recent years, we have experienced a significant shortage of employees in the MA group. Again this year, Statistics Canada is expecting to hire 25 to 30 qualified candidates into the MA group.

In recent years, Statistics Canada has made general presentations about the recruitment campaign providing information for all of the career streams that were hiring at Statistics Canada. This year, we will be conducting information sessions that specifically target students in the mathematics and statistics fields, in the appropriate departments. I hope you will encourage your students and graduates to consider Statistics Canada as a potential employer, and to participate in the recruitment campaign.

The information session is primarily intended for graduates and students who expect to graduate by December 2001. Candidates with a university degree in another discipline and students not in their final year are also welcome to attend, as they may find it helpful in making course selections and choosing a career path.

CHRISTMAS PARTY:

Our annual Christmas Party will be at the Faculty Club on December 2, 2000. Please keep the evening open.

18. DEPARTMENTAL PICNIC

James Lewis

There was a great turn-out to our department picnic in Hawrelak Park on Saturday, September 9. A warm thanks to all who came to the picnic and contributed to its success, in particular to the many of you who helped out with the barbecuing, and to those who provided the desserts and salads.

19. LETTERS TO THE EDITOR

This is an invitation to all to submit to the editor comments, views, and suggestions on various topics of interest to the mathematics community at this university. Letters to appear in this section must be signed by the author.

20. HUMOUR

A sample of mathematical humour found on the Internet:

A Physicist, a Biologist, and a Mathematician see two people enter a house, and then after some time, they see three people leave the house.

The Physicist concludes, "My initial observation must have been incorrect." The Biologist concludes, "Clearly, the two reproduced..." The Mathematician concludes, "Well, if one more person enters the house, then there will be no-one in the house."