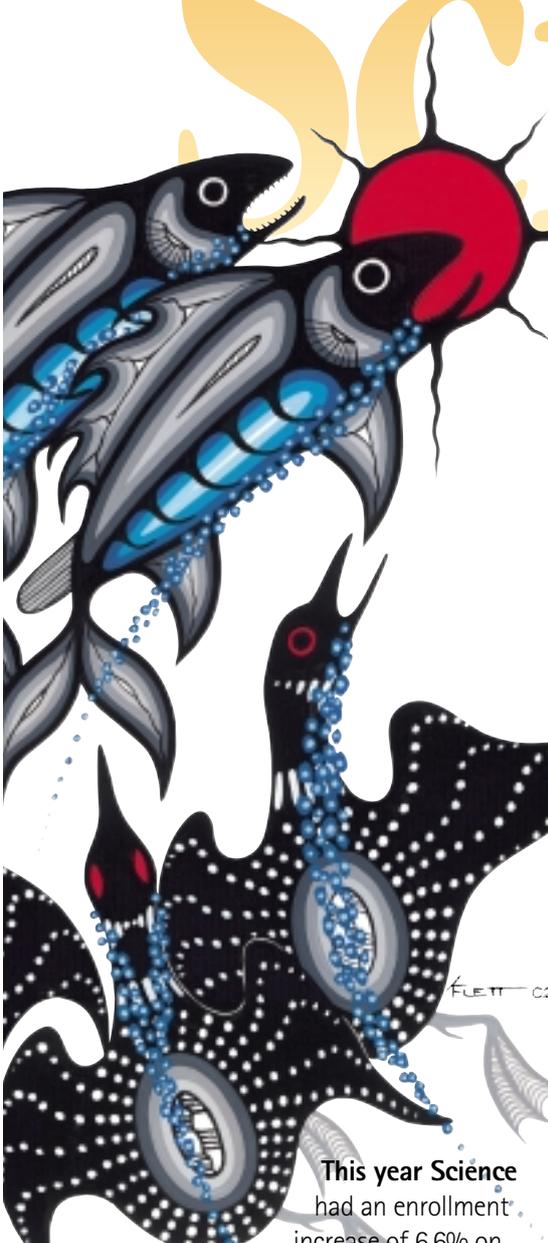


Science

Alumni Newsletter

Winter 2004



Dean's Message

Much of the additional funding resulting from enrollment increases has been directed into graduate student fellowships; forty-five fellowships of \$5,000 were awarded last year. Year 2003 was the second year that Science received infrastructure money from the Federal Government linked to our research take. In 2002 and 2003 we received just over \$200,000 which was used to upgrade

research facilities, particularly laboratory renovations mainly in the Buller Building. In 2003, the total incoming research funds were in the order of \$7M which has been complemented by upwards of \$700,000 of Canadian Foundation for Innovation (CFI) funding. Also worthy of note has been the appointment of Dr. Peter Loewen (Microbiology) and Dr. Tapash Chakraborty (Physics) as Tier 1 Canada Research Chairs and Dr. Michael Freund (Chemistry), Tier 2. In addition, many of our lecture rooms have been upgraded as a result of Provincial infrastructure funding. Last year we formally opened the new Delta Marsh Field Station student residence. This replaced huts, which were of World War 2 vintage. We are grateful to the Thomas Sill Foundation and the Winnipeg Rh Institute Foundation for lead donations to cover part of the cost of this initiative. The other major project is the EITC complex. This is a \$52M project to upgrade/replace the Engineering buildings and provide space for the Computer Science Department which will move into the reconstructed complex, probably in 2005. About 60% of the funding is in place and the remainder will be raised in the next



few years. The Faculty of Environment came into being July 1, 2003 and this resulted in

the transfer of the Geological Sciences Department and the Environmental Science Program into this new Faculty. This year we will be celebrating the Centennial of the Faculty of Science. In 1904 the first six professors were appointed in the University and they were all scientists. To celebrate this event the Faculty is holding a Centennial Banquet at the Fort Garry Hotel on April 3 and there will be other celebrations in Chemistry, Physics and Botany.

On balance, the Faculty of Science is healthy and we are looking forward to another great year. This will be my last message as Dean of the Faculty of Science. I will be stepping down on June 30, 2004 to go back to my research laboratory. This being the case, I would like to use this opportunity to thank all of the members and friends of our Faculty for their support and for contributing to the pleasure that ten years as Dean of the Faculty of Science has been for me. My successor has been chosen. Effective July 1, 2004 Mark D. Whitmore, who is currently a Professor of Physics at Memorial University, Newfoundland will be Dean. All of us are looking forward to the new administration and wish Mark well.

James C. Jamieson



This year Science had an enrollment increase of 6.6% on

top of an increase of 6.7% last year. Many junior level classes are now full and it is unlikely that increases of this magnitude can be accommodated in the future without additional resources being added to the system. However, the increases in the last three years will flow through to senior level courses where students can still be accommodated so that there will be an increase in enrollments next year. We now have the largest graduate student enrollments since 1994. Enrollment increases benefit the Faculty because budget is connected to enrollments.

Honours and Awards

The following is a list of some of the many honours and awards received by faculty members in Science during 2003.

Ken Standing, Professor of Physics & Astronomy, was selected by the American Chemical Society as the 2004 recipient of the Frank H. Field and Joe L. Franklin Award for Outstanding Achievement in Mass Spectrometry.

Dr. Standing was also elected a Fellow of the American Physical Society at the APS Council meeting in November 2003.

Peter King, Professor of Computer Science, was awarded the ACM Engelbart award for Best Paper at the annual ACM Hypertext Conference.

Abba Gumel, Professor of Mathematics, has received the honour of 2003 Young African Mathematician Medalist at the AJMU-ICMS 2003 (African Mathematical Union – International Conference of Mathematics Sciences) held at the University of Agriculture in Abeokuta, Nigeria.

John Vail, Professor of Physics & Astronomy, has been elected to a Fellowship in the Institute of Physics.

Spencer Sealy, Professor of Zoology, has been appointed to COSEWIC (Committee on the Status of Endangered Wildlife in Canada).

Liqun Wang, Professor of Statistics, has been appointed Chairperson of the Research Committee of the Statistical Society of Canada.

Richard Sparling, Professor of Microbiology, is the President of the Canadian Society of Microbiologists, for a one year term ending June 2004.

Robin Connor, Dean Emeritus and Professor Emeritus, was awarded a Queen's Golden Jubilee Medal.

David Punter, Professor of Botany, was appointed to the Canadian Biotechnology Advisory Committee (CBAC) for a term ending December 31, 2006. The CBAC

provides integrated advice to the Government of Canada on a full range of emerging biotechnology issues, from ethics and the environment, to science and economic development.

Samar Safi-Harb, Professor of Physics & Astronomy, has had her University Faculty Award renewed with significantly increased NSERC funding.

The following Faculty members received CFI New Opportunities Awards:

Mario Bieringer and **Frank Schweizer**, Chemistry; **Andrew Frederiksen**, Geological Sciences.

The Faculty of Science received three Canada Research Chairs in 2003:

Peter C Loewen, Tier 1 Canada Research Chair in Protein Chemistry.

Tapash Chakraborty, Tier 1 Canada Research Chair in Nanoscale Physics.

Michael Freund, Tier 2 Canada Research Chair in Conducting Polymers and Electronic Materials.

Ted Shaefer, retired Distinguished Professor, Department of Chemistry, was appointed Member of the Order of Canada on January 17, 2003.

George Grätzer, Distinguished Professor, Mathematics, was awarded the Béla Szökefalvi-Nagy Medal for 2003 from the

Bolyai Institute of the University of Szeged.

Teaching Awards

Brenda Hann, Professor of Zoology, has been awarded the Dr. and Mrs. H. H. Saunderson Award for excellence in teaching at Convocation 2003.

Norman Kenkel, Professor of Botany, was awarded the Graduate Student's Association Award for excellence in graduate teaching at Convocation 2003.

Stephane McLachlan, Environmental Science, **Norman Halden**, Geological Sciences and **Robert Craigen**, Mathematics, received the honour of outstanding teachers at the Students' Teacher Recognition Reception on May 1, 2003.

Elena Smirnova, Instructor in the Department of Chemistry, was the winner of the 2003 University I Teaching Awards.

Merit Awards

The following faculty members received Merit Awards for excellence in teaching or research for the academic year 2002-2003.

Elena Smirnova, Chemistry and **Peter Penner**, Mathematics - teaching.

Robert Stanton, Computer Science and **Pavel Dibrov**, Microbiology - research.

RoboCup 2003

Professors **Jacky Baltes** and **John Anderson** (Computer Science), **Sara McGrath** (co-op student supervised by Dr. Baltes) and five grad students travelled to Padua, Italy to take part in an international robotics competition, RoboCup 2003. Tao-Pie-Pie, the robot, and the team (Sara and Jacky) placed 2nd when Tao-Pie-Pie scored a goal at the 59.16 second mark of a one minute time limit. As a measure of the difficulty this involves, there are only three under 40 cm robots in the world that enter this competition, two (Tao-Pie-Pie included) are completely autonomous, the third is controlled by a joystick operated by a human. For the free demo, Tao-Pie-Pie attempted a slalom walk through three poles. Although Tao-Pie-Pie headed for the wrong pole, it was one of the most technically difficult demos attempted by an autonomous humanoid. This resulted in bonus points and a third place finish. Congratulations to the team!!



Delta Marsh Field Station

Distinguished Professor Chander Kanta Gupta

Chander Kanta Gupta of the Department of Mathematics, received the title of Distinguished Professor at the May 2003 Convocation.

The title, Distinguished Professor, is conferred by the University of Manitoba on academic staff members who have demonstrated outstanding distinction in research, scholarship, creative, professional and teaching. Dr. Gupta is an internationally recognized mathematician whose work on algebra covers a wide range of topics in group theory. She has dealt with, and



Her results have earned critical acclaim by mathematicians around the world.

successfully completed, some of the most difficult and fundamental problems in this area of mathematics. Her results have earned critical acclaim by mathematicians around the world. She is described as a scholar with remarkable drive and talent who has collaborated with leading colleagues in many countries. As a result of her scholarship, the University of Manitoba is recognized in the international community as a leading centre for research in combinatorial group theory. Dr. Gupta graduated with her doctoral degree from the Australian National University and joined the University of Manitoba in 1968. Of the many honours and awards extended to her, the most significant one was her election to fellowship in the Royal Society of Canada, when she became the first woman to be elected to its mathematical division.

A new 3,400 square foot residence building was opened officially on April 19, 2003 at the Faculty of Science's Delta Marsh Field Station on the shore of Lake Manitoba. It replaced a poorly insulated, World War II-era building acquired in the late 1960s from a nearby air base and demolished in 2002. The new two-storey residence, designed by Syverson-Monteyne Architecture and built by Regent Construction, provides climate-controlled, energy-efficient accommodation for up to 14 people. A kitchen and meeting room overlooks the lake.

The opening ceremony was attended by Doug Martindale MLA, on behalf of the Provincial Conservation Minister; Jim Knight, Reeve of the Rural Municipality of Portage La Prairie; President Szathmáry, and Dean Jamieson. Members of the Thomas Sill Foundation, Rh Foundation, and Portage Et District Foundation, all of which provided funds for the construction, were among about 100 people in attendance, along with members of Friends of the



Gordon Goldsborough, Director, in front of new residence.

Field Station and other guests. A room was named for Dr. A. J. (Sandy) Macaulay, one of the first graduate students to work at the field station, who passed away in early 2003. A bald eagle, which was found injured and nursed back to health by the Manitoba Wildlife Rehabilitation Organization, was released back into the wild at the conclusion of the ceremony, which was followed by a luncheon.



Nuclear Magnetic Resonance

NMR of Solids has arrived at the U of M! Thanks to joint funding totaling \$2.1M from the Canada Foundation for Innovation, the Province of Manitoba and Varian, Inc., a state-of-the-art, 600 MHz nuclear magnetic resonance spectrometer is operational

in the Department of Chemistry. Project leader Scott Kroeker made a brief presentation to a gathering of distinguished guests and media representatives at the opening ceremony June 10, 2003, highlighting the benefits of a high magnetic field, fast sample spinning and powerful and precise electronics, for advanced techniques in solid-state NMR. In addition to serving Kroeker's research in materials science, the facility supports work in fields ranging from protein chemistry to mineralogy.

Student Accomplishments

Following are just a few of the many student awards and honours this year. Congratulations!!

2003 Science Medals

Gold Medal: **David Tuluso**

B.Sc. (General): **Mark Oppenheimer**

B.Sc. (Major): **Cynthia Czajka**

B.Sc. (Honours): **Roger Woodford**

Ashley Jaworski, an Honours Chemistry student, received a 2003 Pfizer Summer Undergraduate Research Fellowship.

Shaohong Cheng, Ph.D. student of Professor G. Valdimarsson, won for best poster National CIHR Gold Award at Research Days.

Aleksandra Leligdowicz, B.Sc. in Microbiology (with distinction) in 2002, was awarded the 2004 Rhodes Scholarship.

David Wilson and **Robert Senkiw**, M.Sc. students with Jim Hare, received Sigma Xi Grants in Aid of Research from Sigma Xi USA.

Andrew Christie, of Cangene, was the recipient of the 2003 Graduate Achievement in Industry Award. Dr. Christie received his Ph.D. in Microbiology in 1997.

Four teams from Mathematics participated in this year's regional NCS/MAA team mathematics competition. 3 teams placed in the top 10.

The Mathematics Department team, consisting of **Roger Woodford**, **Matthew Hasselfield** and **Nick Harland** placed 23rd in North America in the 43rd Annual Putnam Mathematics Contest. There were 475 teams from institutions across Canada and the United States.

The Faculty of Science awarded 45 Graduate Studentships for 2003-2004, 25 students receiving awards for Year 1 of 1, and 20 for year 2 of 2.

47 students received NSERC Undergraduate Summer Research Awards, 7 received Aboriginal NSERC Undergraduate Research Awards and 16 students received Faculty of Science awards.

Faculty Endowment Fund Report

Thanks to the generous support of alumni, staff, students and friends, the Endowment Fund this year was able to allocate funds totaling \$212,787.00. As required by the terms of reference for the Endowment Fund Committee, the results of the funding competition are reported below.

Department or Group	Funding
Botany	22,312.00
Chemistry	13,264.00
Computer Science	20,263.00
Introductory Biology	19,590.00
Mathematics	8,511.00
Microbiology	11,537.00
Physics	20,485.00
Astronomy	14,820.00
Statistics	12,560.00
Zoology	27,002.00
Delta Marsh	10,703.00
Ecology Program	10,984.00
WISE	3,450.00
Science & Tech. Library	6,000.00
Let's Talk Science	7,000.00
SSA	4,306.00

TOTAL ALLOCATED: 212,787.00

If Faculty of Science alumni wish to make a contribution to the Faculty, please contact the Department of Private Funding, the University of Manitoba; telephone: (204) 474-9195 or Fax: (204) 474-7635.

Homecoming and the Class of 1943

The Faculty of Science hosted the graduating class of 1943 at the Homecoming celebrations held in September. The Dean joined 27 members of the group for breakfast at the Canad Inn Pembina Highway and this was followed by a tour of the Science complex and a luncheon in 250 Allen. Several members of the group were presented with a Science "T" shirt. In the evening, members of Science administration, guests and students accompanied the class of 1943 at the Homecoming banquet at the Canad Inn Polo Park.

Support Staff News

There have been several support staff changes in the Faculty during 2003. In the Dean's Office, **Pat Pachol**, Confidential Secretary to the Dean, retired after 22 years of service. **Lorraine Lester** replaced her. **Marilyn Shantz**, of the Department of Physics and Astronomy, replaced Lorraine as Confidential Secretary to the Associate Deans. **Jennifer West** was hired as the WISE Program Coordinator to replace **Colleen Flather** who is on maternity leave. We welcomed back **Andrea Deters**, administrative assistant in the Dean's Office, who was on maternity leave throughout 2003. Finally, we welcomed **Kris Winkler** to the front office team in the Dean's Office in December. In

the department offices, **Evelyn Skelton**, Mathematics, retired in May after 21 years of service and **Jennifer Smart** was hired to replace her. **Susan Beshta** replaced Marilyn Shantz in Physics and Astronomy. **Diane Kunec** now runs the Co-op program.

Faculty Retirements

The following Faculty members retired from the University in 2003:

Leonard Kruczynski, Chemistry; **George Clark**, Geological Sciences; **Harry Lakser**, Mathematics; **Robert Barber**, Physics & Astronomy; **Geoff Eales**, Zoology, and **Richard Bochonko**, Physics & Astronomy

We welcome comments and suggestions for future newsletters, reunions, or other matters regarding the Faculty in general. Contact the Dean's Office, Faculty of Science, The University of Manitoba, Winnipeg, MB R3T 2N2 (L. Lester, Editor)
E-Mail: lesterla@ms.umanitoba.ca

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