Faculty of Science

Annual Report
2001
This report has been produced to celebrate and document the successes enjoyed by the Faculty of Science over the past year. It is to serve as a benchmark and used to instill faculty and staff with the confidence and pride necessary to inspire us to even greater accomplishments.

The Faculty of Science has experienced many changes since September 2000 – new faces, new directions, renewed vigor. Twenty-two new tenure track faculty members, 9 limited term appointments, and 5 new staff were welcomed to the Faculty. This infusion of new ideas, expectations and enthusiasm, will undoubtedly result in innovative initiatives in both research and teaching within the Faculty.

Over the past few years, a concerted effort has been made to increase student enrolment across the Faculty of Science. Our efforts of having a more visible presence at the annual University Fair and actively participating in student recruitment have resulted in the Faculty experiencing a 11.4% increase in full-time student enrolment over September 2000. The number of students expressing a specific interest in our science programs at this year’s University Fair was also particularly gratifying.

In our continuing aim to provide students with an array of contemporary academic programs in emerging career fields, in addition to the traditional complement of Bachelor of Science degrees offered in a number of disciplines, approval was sought and given last year to expanding our programs to include a Bachelor of Science in Biology and Biotechnology, a Bachelor of Science in Biochemistry and Biotechnology, a Bachelor of Science in Geoinformatics, a Bachelor of Operational Research, and a Bachelor of Mathematics. Also, the Bachelor of Science in Environmental Science degree program underwent significant revision and the Bachelor of Science in Geology and the Bachelor of Science in Environmental Geoscience programs were redesigned to meet criteria for professional licensure. Recently, one of our relatively new program initiatives received national recognition. The University of Windsor won the National category of the Canadian Association for University Continuing Education (CAUCE) 2001 Awards for Program Excellence. The award is in recognition of the Bachelor of Science Degree Completion Program for Medical Laboratory Technologists, developed by the University's Centre for Flexible Learning, the Faculty of Science, and St. Clair College. This degree is the only Science degree-completion program in Canada available entirely by distance education. The first students graduated from this program at the Spring 2000 convocation, and over 200 individuals are registered in the program.

Faculty members continue to develop research initiatives that receive unprecedented international and national recognition for excellence. Of the 22 faculty members honoured at the University of Windsor 2nd annual Celebration of Research and Scholarship Excellence in September 2001, 16 were from the Faculty of Science. In the past year, the Faculty received 2 Industrial Research Chairs and 3 Canada Research Chairs; successfully applied for 7 Canada Foundation for Innovation (CFI) research projects; and experienced a 16% increase in the annual amount of individual research grants received from the Natural Sciences and Engineering Research Council (NSERC) of Canada. This bears witness to the fact that the Faculty of Science is indeed, the Research Faculty.

Research is not the only priority of the Faculty of Science. We remain committed to providing quality instruction to our students and are cognizant of our accountability to the taxpayers of
Ontario to educate our youth for the benefit of society. Over the past year, three faculty members received teaching awards in acknowledgement of their teaching abilities, passion and dedication to students.

I am extremely proud of the accomplishments of the Faculty of Science. My sincerest thanks are extended to both faculty and staff for their dedication and support. In particular, I would like to acknowledge the tireless efforts of the staff in the Dean’s office and of the Associate Dean, Dr. Lesley Lovett-Doust. Dr. Lovett-Doust is responsible for organizing all of our student-centred events which this year also included expanded Windsor Welcome Week orientation activities. Never before has the Faculty of Science and its students had such a presence on campus or displayed such spirit. May we be motivated by their zeal as we set our goals for the year ahead.

The University of Windsor Daily News was an invaluable source of information in the preparation of this report. I am, therefore, indebted to the writing and reporting efforts of John Carrington, Manager News Services, Public Affairs and Communications. Also, on behalf of the Faculty of Science, I offer our gratitude to Wendy Caron for her great efforts in the creation of this document. She has volunteered many hours of her time to make this project a reality and, as a result, I feel we can be proud of our First Annual Report.

Since this is a new initiative, I would appreciate receiving any comments you may have on the format or content of this report. Please feel free to contact me by e-mail at rcaron@uwindsor.ca or by telephone at 253-3000 ext. 3010.

Dr. Richard J. Caron
Dean, Faculty of Science
University of Windsor
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Over the past year, the Faculty of Science has enjoyed tremendous success in terms of national and international recognition of research excellence, teaching, positive new program initiatives, student recruitment, and service to the academic community. This report highlights and documents these accomplishments and provides a snapshot of the Faculty over the past year. Further, it reveals that the Faculty of Science is a vital, dynamic, contributing part of the University of Windsor.

The report is organized into six parts as follows:

Part I is this Introduction.

Part II provides an overview of the Faculty of Science and includes a description of its various Departments; a listing of faculty and staff; a brief introduction of new faculty and staff members; an acknowledgement of recent promotions and retirements; and a record of service on various University/Faculty committees and within the academic community.

Parts III and IV examine various aspects of Undergraduate and Graduate Programs offered by the Faculty, including enrolment statistics and trends, the number of degrees awarded, and scholastic achievement.

Part V details the research and scholarship excellence in the Faculty.

Part VI serves to demonstrate the commitment of the Faculty to teaching excellence by recognizing University teaching award winners; announcing the names of the faculty member within each Department that achieved the highest weighted mean teaching score; and acknowledging Sessional instructors.

The Faculty of Science has 103 tenure track faculty members, 13 limited term appointments, 24 office/administrative staff, 26 technicians and support staff, about 1700 full time and 800 part time undergraduate students, and 216 graduate students. The Faculty is organized as follows: the Departments of Biological Sciences, Economics, and Mathematics and Statistics; the School of Computer Science; and the School of Physical Sciences consisting of the Departments of Chemistry and Biochemistry, Earth Sciences, and Physics. Students are able to pursue degree programs in all of these disciplines at the undergraduate (B.Sc. and B.Sc. Honours) and Masters graduate level. With the exception of Earth Sciences, Economics and Computer Science, graduate programs are offered leading to a Doctor of Philosophy (Ph.D). Opportunities for interdisciplinary and concurrent degree programs are also available. A complete description of all of the degrees obtainable from the Faculty of Science, and their requirements, is provided in the University of Windsor Undergraduate and Graduate calendars or at the University website www.uwindsor.ca.
**Department of Biological Sciences**

The areas of study in Biological Sciences include: biological sciences, biotechnology; environmental biology; professional and graduate school preparation; and special programs (e.g., Biology and Psychology Joint Honours Program in Behaviour, Cognition and Neuroscience). The programs offered provide a solid foundation for graduates to pursue careers in research, environmental quality or various health care professions. Laboratories provide complete facilities for modern cellular and molecular biology and recombinant DNA procedures including cloning, sequencing, and functional genomics. Many individuals in the Department are affiliated with the Great Lakes Institute for Environmental Studies (GLIER). Specific research pursuits of faculty include: signal transduction, aquatic ecology (spatial distributions, animal behaviour, and exotic species) behavioural ecology, ecotoxicology, cell fate determination, germination, proteases, bioremediation, plant population biology, mating system evolution, landscape ecology, plant metapopulations, population and community ecology, biological invasions, zooplankton ecology, conservation biology, fish and community ecology; coral reef ecology, plant morphogenesis, the olfactory system and molecular regulation of developmental mechanisms.

**Department of Economics**

The Economics Department offers a strong undergraduate program taught by a mix of experienced senior faculty and eager young faculty. The program prepares students for employment and/or graduate school and professional programs such as Law. The small graduate program offers personal attention and a solid foundation for employment as an Economist or for further study in a Ph.D. Program. Research interests of faculty include: economics of information and uncertainty, intermediation, housing, quality differentiation, microeconomic theory, urban economics, development economics, applied econometrics and economic statistics, labour economics, applied economics, applied microeconomics, non-parametrics and semiparametric statistics, financial markets, international trade, regional economics, macroeconomic theory, occupational health and safety, social assistance programs, literacy, corporate finance, economics of sports, macroeconomics, resource and environmental economics, citizen participation, growth and the environment, environmental economics, social choice theory, game theory, international trade and finance and bargaining and repeated games.

**Department of Mathematics and Statistics**

The Department of Mathematics and Statistics offers a broad spectrum of programs in mathematics, statistics, operational research, actuarial science, math and computer science and multi-disciplinary mathematical studies. The department is particularly strong in the area of applied mathematics and has faculty expertise in the areas of: applied probability, queueing theory, stochastic processes, functional analysis, abstract harmonic analysis, differential geometry, mathematical relativity, operational research, mathematical programming, optimization, Lie algebras, Lie groups and representation theory.

**School of Computer Science**

The goal of the School of Computer Science is to equip students with the knowledge and skills needed to develop and apply techniques that will advance the interaction of person and machine. This synergy offers the best hope for finding solutions to pressing world problems requiring the analysis of vast amounts of data. Faculty expertise exists in: distributed query optimization, multimedia databases, distributed object based systems, data warehousing systems, data mining,
database transaction processing, networking, high performance computing, grid computing, natural language processing, intelligent agents, information retrieval, ontology for commonsense knowledge, artificial intelligence, cognitive science, computational geometry, all-optical networks, parallel algorithms, graphics, image processing and software engineering.

**School of Physical Sciences**

**Department of Chemistry and Biochemistry**

A particular strength of the graduates of this department is that they have been exposed to both chemistry and biochemistry during their 4 years of study. The Chemistry program emphasizes chemistry in the ‘real world’ with a focus on industrial applications including such areas as pharmaceuticals, polymers, petrochemicals and high technology materials. Biochemistry explores the chemistry of biological processes at the molecular level involving the study of protein/nucleic acid structure and function, drug design, DNA science, proteomics and enzymes in biotechnology. The ongoing and expanding research programs in the department are at the forefront of their respective fields and both the new and established faculty are recognized internationally for their excellence in research. The department is home to the Cardiology and Atherosclerosis Research Group as well as the Centre for Catalysis and Materials Research. Faculty expertise exists in the following areas: inorganic chemistry and materials, organic chemistry, physical and analytical chemistry, polymer chemistry, biochemistry, computational biochemistry, environmental analytical chemistry and toxicology, supramolecular chemistry and organometallic chemistry.

**Department of Earth Sciences**

The Earth Sciences Department offers a multidisciplinary program that includes geology and physical geography and focuses on understanding the physical and chemical processes that shape the planet. Aspects of study include the exploration of natural resources, sustainable development of these resources, resource management, environmental assessment and remediation and global change. The Geology and Environmental Geoscience programs offered by the Department are designed to satisfy professional licensure requirements. There is a tradition of research excellence in the following areas: environmental, sedimentary, aqueous and hydrothermal geochemistry; igneous petrology; rock and paleomagnetism; geomicrobiology; GIS, remote sensing and their applications in environmental modeling and resource management; diagenesis and reservoir geology; mineral deposit geology and geophysics; geotectonics; and coastal geomorphology.

**Department of Physics**

The program offered by the Department of Physics is designed to prepare students for leadership positions in both academic and industrial research, and to meet the rapidly growing employment needs of the Canadian High Technology Industry. The combination of basic physical understanding with engineering applications gives graduates the skills to keep pace with a rapidly changing technological world, and interactions of the program with industry through the co-op option keep it up to date with emerging directions in high technology. The research achievements of the physics faculty, with many awards and distinctions to their credit, make the Department one of the highest quality Physics Departments in Canada. All the faculty are active in research, with surface science emerging as a new area of concentration. Areas of research include: atomic and molecular physics, acoustic microscopy, relativity, and surface and thin film physics.
Dean: Dr. Richard J. Caron  
Associate Executive Dean: Dr. Lesley Lovett-Doust  
Interim Associate Dean, Graduate Studies and Research: Dr. Ricardo Aroca

Office of the Dean
Administrative Officer: Ms. Angie Capaldi  
Executive Secretary to the Dean: Mrs. Josette Reaume  
Faculty Development Officer: Fedela Falkner  
Secretary Academic Affairs: Mrs. Kathy Fuerth  
Secretary: Mrs. Brenda Schreiber

Department of Biological Sciences

Head: Dr. David A. Cotter

Department Office
Secretary: Mrs. Nancy Barkley  
Secretary: Mrs. Carolin Lekic  
Secretary: Mrs. Patricia Miles

Faculty:
Professor Emeriti:
Dr. Wilfred G. Benedict  Dr. D.T.N. Pillay

Professors:
Dr. Jan Ciborowski  Dr. Douglas Haffner  Dr. Robert M‘Closkey
Dr. Lynda Corkum  Dr. Jonathan Lovett-Doust  Dr. Peter Sale
Dr. David Cotter  Dr. Lesley Lovett-Doust  Dr. Donovan Thomas
Dr. Michael Dufresne  Dr. Hugh MacIsaac  Dr. Alden Warner
Dr. Hugh Fackrell

Associate Professors:
Dr. Dan Heath  Dr. Michael Weis  Dr. Barbara Zielinski
Dr. Paul Taylor

Assistant Professors:
Dr. Adnan Ali  Dr. Michael Crawford  Dr. Andrew Hubberstey

Lecturer:
Dr. Julie Smit

Adjunct Faculty:
Dr. Stephen Brandt  Dr. Christopher Metcalfe  Dr. Tefror Reynolds
Dr. Timothy Johnson  Dr. Tom Papadopoulos

Post Doctoral Fellows:
Dr. M. Biernacki  Dr. J. Kritzer  Dr. T. Therriault
Dr. D. Jane

Support Personnel/Technicians:
Laboratory Manager: Mrs. Elizabeth Abson  
Technician: Mrs. Usha Jacob  
Technician: Ms. Ingrid Churchill  
Electronic Instrument Technician: Mr. Archie Glasgow  
Bio-Learning Center: Mrs. Louise Mouradian  
Animal/Greenhouse Technician: Ms. Elaine Rupke


**Department of Economics**

**Head:** Dr. Ralph Kolinski

**Department Office**

Administrative Secretary: Ms. Janice Cahill  
Graduate Secretary: Ms. Krystal Ives

**Faculty:**

Professor Emeriti:
Dr. William G. Phillips  
Dr. John C. Strick

Professors:
Dr. Paul Anglin  
Dr. Ramazan Gencay  
Dr. J. Neill Fortune  
Dr. Sang-Chul Suh

Associate Professors:
Dr. Vladimir Bajic  
Dr. Ronald Meng  
Dr. Michael Charette  
Dr. Ralph Kolinski

Assistant Professors:
Dr. Xiaopeng Yin

Lecturers:
Mr. Solomon Aklilu  
Mr. Jamal Hejazi

**Department of Mathematics and Statistics**

**Interim Head:** Dr. Alan Gold

**Department Office**

Administrative Secretary: Mrs. Julie West  
Graduate Secretary: Position Open

**Faculty:**

Professor Emeriti:
Dr. Om Chandna  
Dr. Krishan Duggal  
Dr. Cormac Smith  
Dr. Neil Wigley

Professors:
Dr. Ronald Barron  
Dr. Daniel Britten  
Dr. Richard Caron  
Dr. Karen Fung  
Dr. Purna Kaloni  
Dr. Francis Lemire  
Dr. James McDonald  
Dr. Sudhir Paul  
Dr. Chi Song Wong  
Dr. Nader Zamani

Associate Professors:
Dr. Harold Atkinson  
Dr. Alan Gold  
Dr. Myron Hlynka  
Dr. Zhiguo Hu  
Prof. Paul Manley  
Dr. Tim Traynor

Lecturer:
Mr. Ali El-Saheli

Adjunct Faculty:
Dr. Isidore Fleisher  
Dr. Benjamin Lev  
Dr. David Stanford

Post Doctoral Fellow:
Dr. J. Lou
School of Computer Science

**Director:** Dr. Richard Frost

**Department Office**

Administrative Assistant: Ms. Margaret Garabon-Cookson
Secretary to the Director: Mrs. Gloria Mensah
Graduate Program Secretary: Mrs. Mary Mardegan
Secretary: Ms. Roxanna Moreira
Secretary: Deborah Curran

**Faculty:**

Professors:
Dr. Subir Bandyopadhyay  Dr. Richard Frost  Dr. Robert Kent

Associate Professors:
Dr. Akshai Aggarwal  Dr. Froduald Kabanza  Dr. Angela Sodan
Dr. Boubakeur Boufama  Dr. Liwu Li  Dr. Yung (Peter) Tsin
Dr. Christie Ezeife  Dr. Joan Morrissey  Dr. Xiaobu Yuan
Dr. Scott Goodwin  Mr. Asish Mukhopadhyay  Dr. Ono Tjandra
Dr. Arunita Jaekel

Assistant Professors:
Dr. Imran Ahmad  Dr. Randa El-Marakby  Dr. Walid Saba
Dr. Xiao Jun (Jessica) Chen  Dr. Alioune Ngom  Dr. Ahmed Y. Tawfik

Adjunct Faculty:
Dr. Linganagouda (Raj) Patil

Lecturers:
Dr. Pierre Boulos  Mr. Randi Fortier  Mr. Ziad Kobti
Mr. Jackson Carvalho  Mr. Adlane Habed  Mr. Pratap Sathi
Ms Ritu Chaturvedi  Ms. H. Karen Jin  Mr. Weidong Zhang

**Support Personnel/Technicians:**

Service Course Coordinator: Mr. Douglas Thistle
Distributed Computing Development: Mr. Steve Karamatos
Systems Manager: Mr. Walid Mnaymneh
Assistant Software Technician: Mr. Maunzer Batal
Database Administrator/System Programmer: Mr. Sanjay Chitte
Computer Technician III: Mr. Aniss Zakaria
Senior Computer-Design Technician: Position Open

School of Physical Sciences

**Director:** Dr. Keith Taylor

**Laboratory Services Coordinator:** Ms. Kimberly Lefevre

Department of Chemistry and Biochemistry

**Head:** Dr. Robert Rumfeldt

**Department Office**

Director/Department Head Secretary: Mrs. Petrona Parungo
Administrative Secretary: Ms. Elizabeth Chandler
Graduate Secretary: Ms. Sharon Horne
Secretary: Ms. Linda Bunn
Faculty and Staff

Faculty:

University Professors:
Dr. Dennis Tuck  Dr. Ricardo Aroca

Professor Emeriti:
Dr. John Drake  Dr. John McIntosh  Dr. Dennis Tuck
Dr. Bruce McGarvey  Dr. Roger Thibert

Professors:
Dr. Ricardo Aroca  Dr. Bulent Mutus  Dr. Keith Taylor
Dr. Stephen Loeb  Dr. Douglas Stephan

Associate Professors:
Dr. David Antonelli  Dr. Lana Lee  Dr. Robert Rumfeldt
Dr. James Green

Assistant Professors:
Dr. Sirinart Ananvoranich  Dr. James Gauld  Dr. Siyaram Pandey
Dr. Phil Dutton  Dr. Robert Letcher  Dr. Robert Schurko
Dr. Holger Eichhorn  Dr. Charles Macdonald

Adjunct Faculty:
Dr. Khosrow Adeli  Dr. James Duff  Dr. Gholam-Abbas Nazri
Dr. Joseph Artiss  Dr. Cindy Hutnik  Dr. Arthur Szabo
Dr. Raphael Cheung  Dr. Stephen Keys  Dr. George E. Yee
Dr. Thomas F. Draisey

Post Doctoral Fellows:
Dr. T. Graham  Dr. D. Walsh  Dr. P. Wei
Dr. H. Li

Support Personnel/Technicians:
1st Year Lab Co-ordinator: Mrs. Samantha Murray
Senior Lab Co-ordinator: Mrs. Patricia Aroca
NMR Technician: Mr. Michael Fuerth
Electronics Technician: Mr. James Olsen
Chemical Control Centre: Mr. Terry Edwards, Mr. Jerry Vriesacker, Mr. Mike Siwek

Department of Earth Sciences

Head: Dr. Iain Samson

Geography Program Chair: Dr. Alan Trenhaile

Department Office
Secretary: Ms. Christine Young

Faculty:
University Professor: Dr. David Symons

Professor Emeriti:
Dr. Peter Hudc  Dr. Peter Sonnenfeld  Dr. Terence Smith
Dr. Marie Sanderson
Professors:
Dr. Ihsan Al-Aasm  Dr. Iain Samson  Dr. David Symons
Dr. Brian Fryer  Dr. Frank Simpson  Dr. Alan Trenhaile
Dr. V. Chris Lakhan

Associate Professors:
Dr. Placido La Valle  Dr. Cyril Rodrigues

Assistant Professors:
Dr. Maria Cioppa  Dr. David Fowle  Dr. Phillip Graniero

Adjunct Faculty:
Dr. William Blackburn  Dr. John Greenough

Support Personnel/Technicians:
GIS/RS Coordinator:  Ms. Alice Grgicak-Mannion
Laboratory Demonstrator:  Dr. Michael J. Harris
Geochemistry Technician:  Ms. Misuk Yun

Department of Physics

Head:  Dr. Gordon Drake

Department Office
Department Head/Graduate Secretary:  Ms. Sharon Horne
Editorial Assistant, CJP:  Ms. Anna Marro
Secretary, IRC:  Ms. Sarah Beneteau
Project Coordinator, IRC:  Ms. Emily Schmidt

Faculty:
University Professors:
Dr. Gordon Drake  Dr. William McConkey

Professor Emeriti:
Dr. Mieczyslaw Czajkowski  Dr. Lucjan Krause  Dr. Geza Szamosi
Dr. Frank Holuj  Dr. Mordechay Schlesinger  Dr. Arie Van Wijngaarden

Professors:
Dr. J. Brian Atkinson  Dr. Gordon Drake  Dr. Roman Maev
Dr. William Baylis  Dr. Edward Glass  Dr. William McConkey

Assistant Professors:
Dr. Elena Maeva

Adjunct Faculty:
Dr. Dexter Snyder

Postdoctoral Fellow:
Dr. K. Kim  Dr. L. McAven  Dr. G. Trayling
Dr. K. Korolev  Dr. F. Seriaryn

Support Personnel/Technicians:
Instrument Maker:  Mr. Louis Beaudry
Instrument Maker:  Mr. Erik Clausen
Electronics Technologist:  Mr. Sinisa Jezdic
New Faces in the Faculty

Dr. Akshai Aggarwal, a former Professor and Head of Computer Science at Gurarat University in India, journeyed to Windsor to join the School of Computer Science as an Associate Professor so that he and his wife could be closer to their three children and grandchildren. Dr. Aggarwal’s area of research is high performance computing and cluster computing. He is a voracious reader of literature and poetry and enjoys learning why people behave the way they do.

Dr. Adnan Ali joined the University as an Assistant Professor in Biological Sciences in January 1, 2001, hailing from Princess Margaret Hospital in Toronto. He specializes in cancer research. A classic workaholic, Dr. Ali doesn’t get the opportunity to pursue many leisure activities; but, if afforded the luxury of more hours in a day, next to catching up on sleep, he would love to be able to spend it on a golf course or playing chess.

Prof. Sirinart Ananvoranich began her professional life as a pharmacist, before moving on to a career in academics. As Assistant Professor in the Department of Chemistry and Biochemistry, she will pursue her primary research interest which is studying the biochemical mechanisms of the intra-cellular parasite Toxoplasma gondii, one of the most widespread parasites on earth. Personally, Dr. Ananvoranich's passion is gardening. She also enjoys water colour painting, and spending time with her daughter.

Sanjay Chitte joined the School of Computer Science as a Database Administrator/System Programmer in May 2001. Sanjay obtained his M.Sc. in Computer Science from Windsor and is currently a doctoral student in Electrical Engineering. No wonder he’s always on campus! On those rare occasions when he takes some time off to relax, Sanjay enjoys getting away from it all at Point Pelée or on Pelée Island which are ideal spots for indulging his other pastime - black and white photography.

Dr. Maria Cioppa was the recipient of an NSERC University Faculty Award and is an Assistant Professor in the Department of Earth Sciences. Her primary research interests are environmental geo-physics and paleo-magnetism of oil and gas containing rocks. While she enjoys singing and listening to music, the one thing that she makes time for out of her busy schedule is Aikido. She is actively involved in the University Aikido Club.

Dr. S. Holger Eichhorn is an Assistant Professor in the Department of Chemistry and Biochemistry. His research broadly focuses on the design and synthesis of new "intelligent" molecular entities. Dr. Eichhorn likes bicycling, hiking, skiing, canoeing, sailing, baseball, and soccer – anything to get him outside after spending so many hours in the lab. He can’t escape concocting things however, because he also enjoying spending time in the kitchen, cooking/baking delicious things to eat.
Dr. Randa El-Marakby is an Assistant Professor in the School of Computer Science. Her primary research interests are multimedia networking, Quality of Service (QoS) support, congestion control and scalable structures. In her free time, Dr. El-Marakby unwinds by swimming and reading.

Fedela Falkner left her job of seventeen years at Parks Canada, Visitor Activities, to join the University of Windsor team as Faculty of Science Development Officer. Having a full-time job and three sons, ages 2, 6 and 10, keeps Fedela very busy. She is an avid theatre-goer and, during the winter months, spends as much time as possible at the Fisher Theatre. Fedela is also a self-proclaimed tree hugger and book lover.

Dr. David Fowle is an Assistant Professor in the Department of Earth Sciences and the Great Lakes Institute for Environmental Research. His primary research interests include geomicrobiology and aqueous geochemistry. Personally, Dr. Fowle enjoys making beer and wine in his home, and hiking and canoeing at Lake Temogami. Congratulations are in order ... Dr. Fowle and his wife became first time parents this summer.

Dr. James Gauld, an Assistant Professor in the Department of Chemistry and Biochemistry, is particularly interested in computational biochemistry and chemistry research. This involves the application of computers and the methods of quantum chemistry to the study of biochemical and chemical problems. Outside interests include mountain biking, history, archaeology and paleontology, and the collecting of antique science/science-related books and fossils. Dr. Gauld is also interested in educating Canadians in the truth about Aussies and Steve Erwin, the croc hunter!

Dr. Scott Goodwin is an Associate Professor in the School of Computer Science who enjoys model railroading. Apart from his academic interests, much of Dr. Goodwin's spare time is devoted to raising his two adopted children, Max and Jenny. As a single parent, Dr. Goodwin tries to balance the demands of a full time career and a growing family. Unfortunately, it is often necessary that Max and Jenny spend much of their day unsupervised in a 12'x4' playpen. Don’t panic, Max and Jenny are Scott’s adorable puppies!

Assistant Professor Dr. Phil Graniero is excited to join the University of Windsor's Department of Earth Sciences because of its number of active researchers. His own research interests include integrating geographic information systems with environmental models, and looking at spatial patterns and structures in air photos and satellite imagery. When not working, Dr. Graniero enjoys listening to music, playing the guitar and bass, reading, and spending time with his young son.
Dr. Daniel Heath is an Associate Professor and a Tier II CRC in the Department of Biological Sciences and GLIER. Before joining the University of Windsor, Professor Heath taught for five years at the University of Northern British Columbia where he was instrumental in developing a Fish and Wildlife Conservation Genetics Centre. Current research interests include environmental genetics, evolution, and ecology. Personally, he enjoys playing blues guitar, cabinetwork, and spending time with his two young children.

Dr. Froduald Kabanza is an Associate Professor in the School of Computer Science. His research interests include artificial intelligence, including planning systems, and intelligent training systems and his overall objective is to program systems that can, like humans, reason about their environments and act rationally. Personal pursuits include spending time with his son, playing soccer, and reading. He particularly enjoys biographies on humanitarians because he likes to understand people better.

Dr. Letcher is an Assistant Professor in the Department of Chemistry and Biochemistry, and for the Great Lakes Institute for Environment Research. He is excited to be back in Canada after spending three and a half years on faculty at the Research Institute for Toxicology at Utrecht University in Holland. Dr. Letcher's research interests include aspects of environmental chemistry and toxicology. When he’s not working, he enjoys "good friends and good wine", canoeing and wilderness camping, natural and human history, traveling, photography, and bird-watching.

Dr. Charles Macdonald has recently arrived in Windsor from the University of Texas to assume his position as an Assistant Professor in the Chemistry and Biochemistry Department. His research interests are the computational aspects of synthetic inorganic chemistry and crystallography. Leisure pursuits, when time permits, include weightlifting, soccer, tennis, baseball, volleyball, basketball, and golf.

Dr. Elena Maeva is an Assistant Professor and the first ever, woman professor in the Department of Physics at the University of Windsor. Dr. Maeva works on the physical acoustics of composites and advanced materials and on acoustic microscopy of polymers and polymer blends. While the climate and topography of Windsor are not conducive to her maintaining her championship-level skiing ability, Dr. Maeva does manage to run 5kms a day and loves to participate in any sport, especially with her two children.

Roxanna Moreira assumed her responsibilities as Undergraduate Secretary in the School of Computer Science in July 2001 leaving her position of Graduate Secretary in the Math Department. You would think that after the business day she would be anxious to leave campus to do the things she enjoys, walking the Gnatchio Trail, reading, shopping, and spending time with family, but no, Roxanna is busy taking courses in Business.
Dr. Alioune Ngom came to the University of Windsor from Lakehead University to join the School of Computer Science as an Assistant Professor. His research interest is in the area of artificial intelligence, particularly special machine learning. Monday nights, Dr. Ngom might be found behind a set of drums jazzin’ it up with some friends at Milk, a local downtown establishment.

Dr. Siyaram Pandey joins the Department of Chemistry and Biochemistry as an Assistant Professor after having spent the past two years doing post doctoral work at the National Research Council of Canada. Dr. Pandey will continue to pursue his research interest of human diseases and aging using a cellular model. Dr. Pandey is also keenly interested in expanding public awareness of scientific knowledge and discoveries and has organized open houses and visits to local schools to talk to children about popular science topics.

After being involved in the opening of all three casinos in the City, joining the Dean’s Office in January 2001, didn’t seem like too much of a gamble to Brenda Schreiber. Brenda is a member of the Windsor Car Club. She, and her 1964 Mercury Monteclair, can be seen around town at various car shows and as a regular participant in the Detroit Dream Cruise. Brenda also enjoys exploring different computer software packages and expanding her computer capabilities.

Dr. Robert Schurko is an Assistant Professor in the Department of Chemistry and Biochemistry and researches applications of Solid-State Nuclear Magnetic Resonance and Theoretical Calculations to the Study of Inorganic and Organometallic Materials. When not in the NMR lab, Dr. Schurko enjoys listening to music, cheering on his hometown Winnipeg Bluebombers, and reading literature.

Dr. Angela Sodan brings international experience to the University of Windsor. She has taught computer science at universities in Berlin, Germany and the U.S.A. As an Associate Professor in the School of Computer Science, she will pursue her research interests in parallel processing/runtime systems, the relationship between computer science and philosophy, the social and ethical issues of computer science, and the relationship between the human brain and computer science. When not working, Dr. Sodan enjoys taking photographs and listening to classical music and jazz.

Dr. Ahmed Y. Tawfik is an Assistant Professor in the School of Computer Science. His research interests include temporal and probabilistic reasoning, model based diagnosis, neural networks, and intelligent prediction techniques. When not working, he likes to jog. Dr. Tawfik also enjoys reading and traveling. His favourite sport is basketball.
Dr. Xiaopeng Yin heeded the call “go west young man” and left Montreal to join the Department of Economics as an Assistant Professor. His research interests include international trade, capital movement and growth. Dr. Yin enjoys basketball, hockey, and volleyball (as a spectator) and badminton (as a player). He and his wife and child are enjoying the small town quiet, yet big city convenience of Windsor.

Prof. Xiaobu Yuan is an Associate Professor in the School of Computer Science and teaches software engineering, software testing, and virtual reality. Yuan’s primary research interest is intelligent interface technology, with an emphasis on virtual reality applications in manufacturing. When he is not working, Yuan enjoys playing basketball, volleyball, and badminton, and highly recommends the sports facilities on campus.

Aniss Zakaria is a computer technician with the School of Computer Science coming to the University of Windsor from the University of Sharjan in the United Arab Republics. Aniss is a self-proclaimed ‘computer freak’ and devotes most of his time to finding out everything he possibly can about computers. He is particularly interested in networking.
Milestones

Promotions

A University Professor is a member of faculty with the rank of professor who has distinguished achievements in teaching and wide national and/or international reputation for scholarship or professional accomplishment. At the October 2001 Convocation Ceremonies, Dr. Ricardo Aroca of the Chemistry and Biochemistry Department was recognized as a University Professor. The Faculty of Science is proud to have this honour currently bestowed upon five of its faculty members.

In recognition of their distinguished career at the University of Windsor the following have achieved the status of Professor Emeritus over the past year:

Dr. Om Chandna, Department of Mathematics and Statistics
Dr. John Drake, School of Physical Sciences, Department of Chemistry and Biochemistry
Dr. John McIntosh, School of Physical Sciences, Department of Chemistry and Biochemistry
Dr. Terence Smith, School of Physical Sciences, Department of Earth Sciences
Dr. John C. Strick, Department of Economics

Congratulations to the following individuals who were promoted to the rank of Professor:

Dr. Lynda Corkum, Department of Biological Sciences
Dr. Michael Dufresne, Department of Biological Sciences
Dr. Iain Samson, School of Physical Sciences, Department of Earth Sciences

Dr. Daniel Heath, Department of Biological Sciences, and Drs. Arunita Jaekel and Ono Tjandra, School of Computer Science, were promoted to Associate Professor effective July 1, 2001.

Drs. Boubakeur Boufama, Jessica Chen, and Asish Mukhopadhyay of Computer Science and Dr. Daniel D. Heath of Biological Sciences attained tenure effective July 1, 2001.

Administrative Appointments

Dr. Ricardo Aroca, Chemistry and Biochemistry, was appointed Interim Associate Dean of Science - Graduate Studies and Research, for a six-month term starting October 1, 2001. Dr. Aroca's credentials, which include 203 refereed publications and his experience with NSERC Grant Selection Committees, make him a perfect fit for this newly created position.

Mathematics Professor Dr. Ron Barron will be Interim Dean of Graduate Studies and Research for a period of 6 months beginning July 1, 2001 while Dean Sheila Cameron is on administrative leave. Dr. Barron has been reappointed to a five-year term as Associate Dean of Graduate Studies and Research.

Earth Sciences Professor Dr. Frank Simpson commenced his duties as the University of Windsor Co-ordinator of International and Development Research, Education and Training in July 2001. Dr. Simpson will bring considerable experience and commitment to this position. He has long been engaged in international and development research, most recently in India and on a project involving Water Resource Management in Nigeria on a Gully Erosion project. Many Windsor faculty carry out research with international partners and there is a great deal of very diverse expertise on campus applicable to international and development activities. IDRET will assist interested individuals set up multidisciplinary project teams. Dr. Simpson will also continue to teach.
Milestones

Dr. Donovan Thomas of Biological Sciences has been appointed Interim Associate Dean of Graduate Studies and Research for a period of six months beginning July 1, 2001.

Staff Appointments and Promotions

Ms. Margaret Garabon-Cookson was recently appointed to the position of Administrative Assistant in the School of Computer Science. She was previously Secretary to the Director with the School.

Mrs. Gloria Mensah was recently appointed to the position of Secretary to the Director in the School of Computer Science. She was previously a Secretary with the School.

Walid Mnaymnah was recently appointed to the position of Systems Manager in the School of Computer Science. He was previously a Technician with the School.

25 Years of Service

Dr. David Cotter came to Windsor as a Professor of Biology in 1975 from Southeastern Massachusetts University. He was the Associate Dean of Research in 1983-88, and a University of Windsor Research Professor in 91-92. He has been Head of the Department of Biological Sciences since 1998, and he has served on numerous committees including the Senate and the Faculty Association. Throughout Ontario and Michigan he is considered to be the leader of the "Dictyophiles" - a group of people who use the slime mould (*Dictyostelium discoideum*) as their research model organism. Dave has published 78 refereed articles and 4 book chapters, has received continuous research support from NSERC since 1976; and he has directed the largest number of undergraduate honours theses in the Department as well as 23 graduate students. Dave is married to Ann and they have two daughters - one is an M.D. and the other is a professional librarian. They live in Kingsville where they have a beautiful home on Lake Erie. Don’t ever challenge Dave to a game of “Name that Tune” as he has an uncanny ability to remember songs that he has heard on the radio during his daily drives.

Retirements

Several faculty members with many years of exceptional service to the University retired this past year. The experience and expertise of the following colleagues will be greatly missed:

Dr. Om Chandna, Department of Mathematics and Statistics
Dr. John Drake, School of Physical Sciences, Department of Chemistry and Biochemistry
Dr. William Jones, School of Physical Sciences, Department of Chemistry and Biochemistry
Dr. John McIntosh, School of Physical Sciences, Department of Chemistry and Biochemistry
Dr. Gerry (Joseph) McPhail, Department of Mathematics and Statistics
Dr. Benjamin Meyer, Department of Economics
Dr. Michael Selby, Department of Mathematics and Statistics
Dr. Terence Smith, School of Physical Sciences, Department of Earth Sciences
Dr. John Strick, Department of Economics
Dr. Andrew Turek, School of Physical Sciences, Department of Earth Sciences.
The Faculty is indebted to the following faculty and staff who provided service to the University in the following capacities.

**University Committees**

**Senate Representatives***
- Ricardo Aroca, Chemistry & Biochemistry (2)
- Brian Atkinson, Physics (1)
- Vladimir Bajic, Economics (2)
- Dan Britten, Mathematics & Statistics (1)
- David Cotter, Biological Sciences (2)
- Arunita Jaekel, Computer Science (1)
- Cyril Rodrigues, Earth Sciences (2)
- Gordon Drake, Member at Large (2)
- Lesley Lovett-Doust, Member at Large (1)

* Length of term commencing September 2001 indicated in ( ).

**Program Development Committee 2001-2002**

- Faculty of Science Representatives: Vladimir Bajic, Economics
- Dan Britten, Mathematics and Statistics

**Academic Policy Committee 2001-2002**

- Faculty of Science Representative: Michael Dufresne, Biological Sciences
- Faculty of Graduate Studies and Research Representative: Frank Lemire, Mathematics and Statistics

**Student Committee 2001-2002**

- Faculty of Science Representative: Sirinart Ananvoranich, Chemistry and Biochemistry

**Senate Steering Committee 2001-2002**

- Faculty of Science Representative: David Cotter, Head, Biological Sciences

**University Committee on Appointment, Promotion and Tenure 2001-2002**

- Faculty of Science Representative: Ralph Kolinski, Head, Economics

**Faculty Committees**

**Science Executive**

- Dean: Richard Caron
- Associate Dean: Lesley Lovett-Doust
- Associate Dean: Ricardo Aroca

**AAU Heads**

- David Cotter, Department of Biological Sciences
- Richard Frost, School of Computer Science
- Alan Gold, Department of Mathematics and Statistics
- Ralph Kolinski, Department of Economics
- Keith Taylor, School of Physical Sciences

**Department Heads**

- Gordon Drake, Physics
- Robert Rumfeldt, Chemistry and Biochemistry
- Iain Samson, Earth Sciences
### Science Council

**Dean**  
Rick Caron  
**Associate Dean**  
Lesley Lovett-Doust  
**Associate Dean**  
Ricardo Aroca  
**Biological Sciences**  
Dave Cotter (Head)  
Jan Ciborowski (Faculty)  
Keith Gale (Student)  
**Computer Science**  
Richard Frost (Head)  
Subir Bandyopadhyay (Faculty)  
( Student)  
**Economics**  
Ralph Kolinski (Head)  
Vladimir Bajic (Faculty)  
Raul Hernandez (Student)  
**Mathematics and Statistics**  
Alan Gold (Interim Head)  
Frank Lemire (Faculty)  
( Student)  
**Physical Sciences**  
Keith Taylor (Head)  
(2 Faculty)  
Gordon W. F. Drake (Faculty)  
Iain Samson (Faculty)  
( Student)  
**Ex-Officio (without vote)**  
Robert Rumfeldt (Head, Chemistry and Biochemistry)

### Science Program Development Committee

**Dean**  
Rick Caron  
**Associate Dean**  
Lesley Lovett-Doust  
**One representative from:**  
**Biological Sciences**  
Hugh Fackrell  
**Computer Science**  
Boubakeur Boufama  
**Economics**  
Michael Charette  
**Mathematics and Statistics**  
Harold Atkinson  
**Four representatives from Physical Sciences with at least one from each Department:**  
**Physics**  
Brian Atkinson  
**Earth Sciences**  
Alan Trenhaile  
**Chemistry & Biochemistry**  
Stephen Loeb  
Robert Rumfeldt

### Science Recruitment and Retention Committee

**Chair:**  
Lesley Lovett-Doust  
**Ex-officio:**  
Katia Cowie (Student recruitment representative)  
**One representative from each Department:**  
**Biological Sciences**  
Michael Weis  
**Chemistry & Biochemistry**  
Robert Schurko  
**Computer Science**  
Christie Ezeife  
**Earth Sciences**  
Michael Harris  
**Economics**  
Edward Glass  
**Mathematics and Statistics**  
Harold Atkinson  
**Physics**  
Neil Fortune
**Service to the University**

**Windsor Regional Science Fair Judges (March 2001)**
- Adnan Ali, Biological Sciences
- Randa El-Marakby, Computer Science
- Siyaram Pandey, Chemistry and Biochemistry
- Fawzy Saad, Biological Sciences
- Robert Schurko, Chemistry and Biochemistry
- Michael Weis, Biological Sciences

**Student Recruitment Phonathon (May 2001)**
- Pierre Boulos, Recruitment Officer
- Richard Caron, Dean of Science
- Lesley Lovett-Doust, Associate Dean of Science
- Robert Rumfeldt, Head, Chemistry and Biochemistry

**Meet and Greet (July 2001)**
- Lesley Lovett-Doust, Associate Dean
- Brenda Schreiber, Faculty of Science
- Keith Taylor, School of Physical Sciences
- Alan Trenhaile, Earth Sciences
- Barbara Zielinski, Biological Sciences

**University Fair – September 21-23, 2001**
- Brian Atkinson, Physics
- Pierre Boulos, Computer Science
- Richard Caron, Dean, Mathematics and Statistics
- Lesley Lovett-Doust, Biological Sciences
- Robert Rumfeldt, Chemistry and Biochemistry
- Iain Samson, Earth Sciences
- Douglas Thistle, Computer Science

**Head Start Advisors**

<table>
<thead>
<tr>
<th>Field</th>
<th>Advisor</th>
<th>Advisor</th>
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</thead>
<tbody>
<tr>
<td>Science</td>
<td>Lesley Lovett-Doust</td>
<td>Paul Taylor</td>
</tr>
<tr>
<td></td>
<td>Kathy Fuerth</td>
<td></td>
</tr>
<tr>
<td>Biological Sciences</td>
<td>Barbara Zielinski</td>
<td>Paul Taylor</td>
</tr>
<tr>
<td></td>
<td>Hugh Fackrell</td>
<td></td>
</tr>
<tr>
<td>Chemistry &amp; Biochemistry</td>
<td>Phil Dutton</td>
<td>Christie Ezeife</td>
</tr>
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<td></td>
<td>Robert Schurko</td>
<td>Walid Saba</td>
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<tr>
<td>Computer Science</td>
<td>Imran Ahmad</td>
<td>Jackson Carvalho</td>
</tr>
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<td></td>
<td>Subir Bandyopadhyay</td>
<td></td>
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<tr>
<td></td>
<td>Boubakeur Boufama</td>
<td></td>
</tr>
<tr>
<td>Earth Science</td>
<td>Placido LaValle</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Brenda MacMurray</td>
<td></td>
</tr>
<tr>
<td>Economics</td>
<td>Vladimir Bajic</td>
<td></td>
</tr>
<tr>
<td>Mathematics &amp; Statistics</td>
<td>Harold Atkinson</td>
<td></td>
</tr>
<tr>
<td>Physics</td>
<td>Brian Atkinson</td>
<td></td>
</tr>
</tbody>
</table>
Service to the University

Academic Counselors

Biological Sciences
- Paul Taylor, Head Counselor
- Michael Weis
- Hugh Fackrell
- Barbara Zielinski
- Lynda Corkum (Great Lakes Coop)
- Michael Crawford
- Jonathon Lovett-Doust

Chemistry and Biochemistry
- Robert Rumfeldt

Computer Science
- Subir Bandyopadhyay
- Arunita Jaekel
- Joan Morrissey
- Peter Tsin

Earth Sciences
- Cyril Rodrigues (Geology and Environmental Geoscience)
- Alan Trenhaile (Geography)
- Phil Graniero (Geoinformatics)
- Iain Samson (Environmental Science)

Economics
- Vladimir Bajic
- Neill Fortune

Mathematics and Statistics
- Harold Atkinson

Physics
- Brian Atkinson

General Science
- Lesley Lovett-Doust
- Robert Rumfeldt

Service to the Academic Community

Faculty members are regularly sought out by various professional societies, government agencies and private organizations to provide expertise with respect to: refereeing articles submitted for publication; reviewing grant applications; participating on grant and scholarship selection committees (NSERC, OGS); and organizing conference programs and sessions. The involvement of faculty in these activities is too numerous to document in this report. Executive positions held by faculty members in National Professional Societies as well as Editorial positions with Professional journals are, however, highlighted below.

Executive Positions with National Societies

Ricardo Aroca, Board of Directors, Canadian Society for Chemistry (Analytical Division)
Richard Caron, Board of Directors, Canadian Math Society
Gordon Drake, President, Canadian Association of Physicists
Richard Frost, Secretary, Canadian Association for Computer Scientists
Brian Fryer, President, Mineralogical Association of Canada
Ramo Gencay, IEEE Neural Networks Council, Computational Finance Committee Member
Stephen Loeb, Vice-Chair - Inorganic Division, Canadian Society for Chemistry
Lesley Lovett-Doust, Board of Directors, International Association for Great Lakes Research
Roman Maev, Chairman, Division of Applied and Industrial Physics, Canadian Association of Physicists
Iain Samson, Chair of Finance, Mineralogical Association of Canada and Director/Assistant Treasurer, MAC Foundation
Douglas Stephan, Board of Directors, Canadian Society for Chemistry (Inorganic Division)

**Editorial Positions**

<table>
<thead>
<tr>
<th>Name</th>
<th>Position / Journal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ihsan Al-Aasm</td>
<td>Editor-in-Chief, Special Volume on “Geofluids in Sedimentary Basin”, Marine and Petroleum Geology</td>
</tr>
<tr>
<td>Pierre Boulos</td>
<td>Assistant Editor, Journal of the Royal Astronomical Society of Canada</td>
</tr>
<tr>
<td>Richard Caron</td>
<td>Associate Editor, INFOR, Journal of the Canadian Operational Research Society</td>
</tr>
<tr>
<td>Lynda Corkum</td>
<td>Editorial Board, Aquatic Conservation: Marine and Freshwater Ecosystems</td>
</tr>
<tr>
<td>Gordon Drake</td>
<td>Co-Editor, Canadian Journal of Physics, Physical Review A, Atomic Data Nuclear Data Tables</td>
</tr>
<tr>
<td>Ramo Gencay</td>
<td>Associate Editor, Studies in Nonlinear Dynamics and Econometrics, IEEE Transactions on Computational Finance</td>
</tr>
<tr>
<td>Myron Hynka</td>
<td>Editorial Board, NETWORKS, Anna Nagurney (ed.)</td>
</tr>
<tr>
<td>Chris Lakhan</td>
<td>Editor-in-Chief, INDO CARIBBEAN REVIEW</td>
</tr>
<tr>
<td>Frank Lemire</td>
<td>Editor, JP Journal of Algebra and Number Theory</td>
</tr>
<tr>
<td>Robert Letcher</td>
<td>Editorial Board, Environment International</td>
</tr>
<tr>
<td>Stephen Loeb</td>
<td>Editorial Board, Supramolecular Chemistry</td>
</tr>
<tr>
<td>Hugh MacIsaac</td>
<td>Associate Editor, Freshwater Biology, Aquatic Ecosystem Health and Management</td>
</tr>
<tr>
<td>J. Lovett-Doust</td>
<td>Associate Editor, Ecoscience</td>
</tr>
<tr>
<td>J.W. McConkey</td>
<td>International Advisory Committee, Journal of Physics B</td>
</tr>
<tr>
<td>Bulent Mutus</td>
<td>North American Editor, Journal of Chemical Technology and Biotechnology</td>
</tr>
<tr>
<td>Peter Sale</td>
<td>Ecology Editor, Coral Reefs</td>
</tr>
<tr>
<td>Mordechay</td>
<td>Co-Editor, Canadian Journal of Physics</td>
</tr>
<tr>
<td>Schlesinger</td>
<td>Associate Editor, Journal of the Electrochemical Society</td>
</tr>
<tr>
<td>Doug Stephan</td>
<td>Editorial Board, Organometallics</td>
</tr>
</tbody>
</table>

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20
National and International Conferences Hosted in Windsor

In March 2001, Jan Ciborowski hosted a bi-national conference called, 'Lake Erie in the Millennium - Progress and New Issues'. Attendance at the two-day event was about 150 people from Canada and the US.

Bob Kent, School of Computer Science, Chaired the 15th Symposium on High Performance Computing Systems and Applications (HPCS2001) held in Windsor from June 17-June 20th, 2001. This international event brought together academic and industry researchers to discuss state-of-the-art high performance computing and networking technologies and discussed how they may be best used and improved.

The DaimlerChrysler – University of Windsor Centre for Imaging Research and Advanced Materials Characterisation, under the leadership of Dr. Roman Maev, Department of Physics, was responsible for organizing and hosting the 26th International Acoustical Imaging Symposium in Windsor from September 9-12, 2001. This marked the first time the IAIS has come to Ontario and only the second time to Canada since its inception almost 35 years ago. This event, widely recognized as the premier forum for presentations of advanced research results in both theoretical and experimental developments, was a tremendous success.
Undergraduate Programs

Overview

As shown in Table 1, the Faculty of Science currently has a full time undergraduate enrolment of 1706 students - 175 more students than last year. This represents a 11.4% increase in full time enrolment and the fourth consecutive year that the Faculty has grown. A 7% increase in part time enrolment was also experienced with the number of part time students more than doubling in the past three years – from 394 in 1998 to 799 in 2001.

<table>
<thead>
<tr>
<th>Year</th>
<th>Full Time Enrolment (Faculty of Science)</th>
<th>Change in Enrolment</th>
<th>Growth Rate</th>
<th>Part Time Enrolment (Faculty of Science)</th>
<th>Change in Enrolment</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>1147</td>
<td>59</td>
<td>5.1%</td>
<td>317</td>
<td>-6</td>
<td>-1.9%</td>
</tr>
<tr>
<td>1993</td>
<td>1206</td>
<td>141</td>
<td>11.7%</td>
<td>338</td>
<td>27</td>
<td>8.6%</td>
</tr>
<tr>
<td>1994</td>
<td>1347</td>
<td>63</td>
<td>4.7%</td>
<td>292</td>
<td>-46</td>
<td>-13.6%</td>
</tr>
<tr>
<td>1995</td>
<td>1410</td>
<td>-12</td>
<td>-0.8%</td>
<td>334</td>
<td>42</td>
<td>14.4%</td>
</tr>
<tr>
<td>1996</td>
<td>1398</td>
<td>-45</td>
<td>-3.2%</td>
<td>356</td>
<td>22</td>
<td>6.6%</td>
</tr>
<tr>
<td>1997</td>
<td>1353</td>
<td>88</td>
<td>6.5%</td>
<td>394</td>
<td>38</td>
<td>10.7%</td>
</tr>
<tr>
<td>1998</td>
<td>1441</td>
<td>9</td>
<td>0.6%</td>
<td>580</td>
<td>186</td>
<td>47.2%</td>
</tr>
<tr>
<td>1999</td>
<td>1450</td>
<td>81.5</td>
<td>5.6%</td>
<td>746.5</td>
<td>166.5</td>
<td>28.7%</td>
</tr>
<tr>
<td>2000</td>
<td>1531.5</td>
<td>174.5</td>
<td>11.4%</td>
<td>799</td>
<td>52.5</td>
<td>7.0%</td>
</tr>
</tbody>
</table>

Table 2: Faculty of Science Undergraduate Enrolment as a Percent of University Enrolment (Fall) 1992-2001

<table>
<thead>
<tr>
<th>Year</th>
<th>Full Time Enrolment (Faculty of Science)</th>
<th>University Enrolment</th>
<th>% of Total</th>
<th>Part Time Enrolment (Faculty of Science)</th>
<th>University Enrolment</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>1147</td>
<td>11,391</td>
<td>10.0%</td>
<td>317</td>
<td>5299</td>
<td>6.0%</td>
</tr>
<tr>
<td>1993</td>
<td>1206</td>
<td>11,052</td>
<td>10.9%</td>
<td>311</td>
<td>4987</td>
<td>6.2%</td>
</tr>
<tr>
<td>1994</td>
<td>1347</td>
<td>11,083</td>
<td>13.2%</td>
<td>338</td>
<td>4505</td>
<td>7.5%</td>
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<tr>
<td>1995</td>
<td>1410</td>
<td>10,678</td>
<td>13.0%</td>
<td>292</td>
<td>4317</td>
<td>6.8%</td>
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<td>1996</td>
<td>1398</td>
<td>10,243</td>
<td>13.6%</td>
<td>334</td>
<td>3434</td>
<td>9.7%</td>
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<tr>
<td>1997</td>
<td>1353</td>
<td>9,573</td>
<td>14.0%</td>
<td>356</td>
<td>3020</td>
<td>11.8%</td>
</tr>
<tr>
<td>1998</td>
<td>1441</td>
<td>9,357</td>
<td>15.4%</td>
<td>394</td>
<td>2955</td>
<td>13.3%</td>
</tr>
<tr>
<td>1999</td>
<td>1450</td>
<td>9,402</td>
<td>15.4%</td>
<td>580</td>
<td>3247</td>
<td>17.9%</td>
</tr>
<tr>
<td>2000</td>
<td>1531.5</td>
<td>9,649</td>
<td>15.9%</td>
<td>746.5</td>
<td>3201</td>
<td>23.3%</td>
</tr>
<tr>
<td>2001</td>
<td>1706</td>
<td>10,508</td>
<td>16.2%</td>
<td>799</td>
<td>3084</td>
<td>25.9%</td>
</tr>
</tbody>
</table>

1 Prior to 2001, data were obtained from the On-line Fact Book, Fall USIS Head Count information Tables. The 2001 figures were obtained from Enrolment by Faculty and Primary Department for 2001F Only – SRSSTAT(E) 10/15/2001 – CRYSTAL-NT 20015, ARTSS.
While the total number of students in the Faculty is increasing, it is particularly interesting to note that Faculty of Science enrolment as a percent of total University enrolment is also increasing. In 1992, 10% of full time undergraduate students at the University were enrolled in the Faculty of Science, whereas in 2001, this number had increased to almost 16%. The corresponding figures for part time enrolment are even more dramatic: 6% in 1992 and about 26% in 2001. (Refer to Table 2.)

The trend observed throughout the 1990s of an increasing number of female students pursuing Science at the University appears to be reversing. Table 3 reveals that from 1999 to 2000, the percentage of female students enrolled in the Faculty has decreased somewhat from 40% to 37%.

Table 3: Faculty of Science Undergraduate Enrolment by Gender (Fall) 1992-2000

<table>
<thead>
<tr>
<th>Year</th>
<th>Full Time Enrolment</th>
<th>Part Time Enrolment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>%</td>
</tr>
<tr>
<td>1992</td>
<td>715</td>
<td>62%</td>
</tr>
<tr>
<td>1993</td>
<td>732</td>
<td>61%</td>
</tr>
<tr>
<td>1994</td>
<td>811</td>
<td>60%</td>
</tr>
<tr>
<td>1995</td>
<td>846</td>
<td>60%</td>
</tr>
<tr>
<td>1996</td>
<td>820</td>
<td>59%</td>
</tr>
<tr>
<td>1997</td>
<td>770</td>
<td>57%</td>
</tr>
<tr>
<td>1998</td>
<td>843</td>
<td>59%</td>
</tr>
<tr>
<td>1999</td>
<td>868</td>
<td>60%</td>
</tr>
<tr>
<td>2000</td>
<td>970</td>
<td>63%</td>
</tr>
</tbody>
</table>

While the University of Windsor functions as a regional University serving southwestern Ontario, a strategic direction has been to broaden its potential enrolment base beyond Essex County and the ‘tri-county area.’ Tables 4 and 5 reveal that recruitment initiatives in this regard have achieved some level of success. Not only has the percent enrolment from outside Essex County been increasing over the past few years, but a slight decrease in the percent enrolment from Ontario is occurring as well.

Table 4: Geographic Origin of Enrolment 1993-2000

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent Enrolment from Essex County</th>
<th>Percent Enrolment from Ontario</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>72%</td>
<td>99%</td>
</tr>
<tr>
<td>1994</td>
<td>69%</td>
<td>99%</td>
</tr>
<tr>
<td>1995</td>
<td>67%</td>
<td>99%</td>
</tr>
<tr>
<td>1996</td>
<td>62%</td>
<td>99%</td>
</tr>
<tr>
<td>1997</td>
<td>65%</td>
<td>99%</td>
</tr>
<tr>
<td>1998</td>
<td>62%</td>
<td>98%</td>
</tr>
<tr>
<td>1999</td>
<td>62%</td>
<td>97%</td>
</tr>
<tr>
<td>2000</td>
<td>60%</td>
<td>97%</td>
</tr>
</tbody>
</table>

1 Data obtained from the On-line Fact Book, Fall USIS Head Count information Tables.
2 Data obtained from the On-line Fact Book, Student Enrolment Demographics, University of Windsor Full time Student Enrolment by Geographic Origin by Canadian Province and Department.
Table 5: Enrolment from Essex County by Department 1993-2000

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Sciences</td>
<td>82%</td>
<td>79%</td>
<td>76%</td>
<td>75%</td>
<td>77%</td>
<td>73%</td>
<td>77%</td>
<td>78%</td>
</tr>
<tr>
<td>Chemistry and Biochemistry</td>
<td>79%</td>
<td>75%</td>
<td>80%</td>
<td>71%</td>
<td>79%</td>
<td>81%</td>
<td>86%</td>
<td>90%</td>
</tr>
<tr>
<td>Computer Science</td>
<td>59%</td>
<td>58%</td>
<td>56%</td>
<td>55%</td>
<td>48%</td>
<td>45%</td>
<td>45%</td>
<td>44%</td>
</tr>
<tr>
<td>Earth Sciences</td>
<td>69%</td>
<td>69%</td>
<td>54%</td>
<td>42%</td>
<td>43%</td>
<td>56%</td>
<td>53%</td>
<td>61%</td>
</tr>
<tr>
<td>Economics</td>
<td>51%</td>
<td>36%</td>
<td>23%</td>
<td>30%</td>
<td>27%</td>
<td>21%</td>
<td>14%</td>
<td>24%</td>
</tr>
<tr>
<td>Mathematics</td>
<td>76%</td>
<td>69%</td>
<td>76%</td>
<td>70%</td>
<td>72%</td>
<td>76%</td>
<td>74%</td>
<td>74%</td>
</tr>
<tr>
<td>Physics</td>
<td>75%</td>
<td>72%</td>
<td>75%</td>
<td>83%</td>
<td>100%</td>
<td>100%</td>
<td>74%</td>
<td>89%</td>
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<tr>
<td>Science</td>
<td>65%</td>
<td>62%</td>
<td>58%</td>
<td>54%</td>
<td>63%</td>
<td>70%</td>
<td>68%</td>
<td>67%</td>
</tr>
<tr>
<td>Faculty of Science</td>
<td>72%</td>
<td>69%</td>
<td>67%</td>
<td>63%</td>
<td>65%</td>
<td>62%</td>
<td>62%</td>
<td>60%</td>
</tr>
</tbody>
</table>

Enrolment Trends by Department

The distribution of the 1706 full time undergraduate students in the Faculty of Science by department is presented in Table 6 and graphically in Figure 1.

Figure 1: Distribution of Full Time Undergraduate Enrolment by Department 2001

---

1 Data obtained from the On-line Fact Book, Student Enrolment Demographics, University of Windsor Full time Student Enrolment by Geographic Origin by Canadian Province and Department.
It can be seen from Table 6 that all departments experienced an increase in enrolment over last year. This is particularly encouraging because in previous years almost all departments were experiencing declining enrolments. The School of Computer Science experienced the largest increase (68 students) and is the only department that has experienced an increase in enrolment every year since 1996. Enrolment in this program is currently 2.5 times larger than it was in 1996. A graphic representation of enrolment trends by department is provided in Figure 2.

Table 6: Full Time Undergraduate Enrolment by Department (Fall) 1996-2001

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Sciences</td>
<td>493</td>
<td>434</td>
<td>373</td>
<td>304</td>
<td>252</td>
<td>263</td>
</tr>
<tr>
<td>Chemistry and Biochemistry</td>
<td>126</td>
<td>129</td>
<td>143</td>
<td>142</td>
<td>126.5</td>
<td>142</td>
</tr>
<tr>
<td>Computer Science</td>
<td>334</td>
<td>360</td>
<td>559</td>
<td>627</td>
<td>763.5</td>
<td>831</td>
</tr>
<tr>
<td>Earth Sciences</td>
<td>44</td>
<td>43</td>
<td>45</td>
<td>36</td>
<td>26</td>
<td>33</td>
</tr>
<tr>
<td>Economics</td>
<td>78</td>
<td>58</td>
<td>42</td>
<td>39</td>
<td>78.5</td>
<td>104</td>
</tr>
<tr>
<td>Mathematics</td>
<td>64</td>
<td>58</td>
<td>50</td>
<td>41</td>
<td>33.5</td>
<td>53</td>
</tr>
<tr>
<td>Physics</td>
<td>24</td>
<td>20</td>
<td>16</td>
<td>19</td>
<td>17.5</td>
<td>28</td>
</tr>
<tr>
<td>Science</td>
<td>235</td>
<td>251</td>
<td>213</td>
<td>242</td>
<td>234</td>
<td>252</td>
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<tr>
<td>Total Full Time Enrolment</td>
<td>1398</td>
<td>1353</td>
<td>1441</td>
<td>1450</td>
<td>1531.5</td>
<td>1706</td>
</tr>
</tbody>
</table>

Table 7: Part Time Undergraduate Enrolment by Department (Fall) 1996-2001

<table>
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<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Sciences</td>
<td>59</td>
<td>56</td>
<td>37</td>
<td>37</td>
<td>30.5</td>
<td>40</td>
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<tr>
<td>Chemistry and Biochemistry</td>
<td>21</td>
<td>21</td>
<td>14</td>
<td>13</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>Computer Science</td>
<td>81</td>
<td>97</td>
<td>168</td>
<td>316</td>
<td>475.5</td>
<td>551</td>
</tr>
<tr>
<td>Earth Sciences</td>
<td>6</td>
<td>7</td>
<td>10</td>
<td>11</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Economics</td>
<td>30</td>
<td>21</td>
<td>22</td>
<td>27</td>
<td>29</td>
<td>22</td>
</tr>
<tr>
<td>Mathematics</td>
<td>20</td>
<td>10</td>
<td>6</td>
<td>15</td>
<td>13.5</td>
<td>12</td>
</tr>
<tr>
<td>Physics</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Science</td>
<td>115</td>
<td>143</td>
<td>135</td>
<td>159</td>
<td>175</td>
<td>158</td>
</tr>
<tr>
<td>Total Part Time Enrolment</td>
<td>334</td>
<td>356</td>
<td>394</td>
<td>580</td>
<td>746.5</td>
<td>799</td>
</tr>
</tbody>
</table>

Total Faculty of Science Enrolment

| 1732 | 1709 | 1835 | 2030 | 2277.5 | 2505 |

It is important to note that enrolment data for the years prior to 2001 were obtained from the Office of Institutional Analysis (OIA). Prior to 2000, the OIA counted students in joint programs according to the first major recorded, i.e., a Business and Economics student was allocated solely to Business. However, commencing in the year 2000, the OIA started to proportionally allocate students in joint programs to each major, i.e., a Business and Economics student was counted as half a student in Business and half a student in Economics. The impact

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1 Prior to 2001, data were obtained from the On-line Fact Book, Fall USIS Head Count information Tables. The 2001 figures were obtained from Enrolment by Faculty and Primary Department for 2001F Only – SRSSTAT(E) 10/15/2001 – CRYSTAL-NT 20015, ARTSS.
Figure 2: Full Time Undergraduate Enrolment by Department 1996-2001

- Biological Sciences
- Chemistry and Biochemistry
- Computer Science
- Earth Sciences
- Economics
- Mathematics and Statistics
- Physics
- Science
Table 8: Full Time Undergraduate Enrolment by Academic Level and Department (Fall) 2000, 2001

<table>
<thead>
<tr>
<th>Department</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>SPU</th>
<th>Total Enrolment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Sciences</td>
<td>92.5</td>
<td>94</td>
<td>71</td>
<td>67</td>
<td>59</td>
<td>67</td>
</tr>
<tr>
<td>Chemistry and Biochemistry</td>
<td>58</td>
<td>65</td>
<td>24</td>
<td>45</td>
<td>32.5</td>
<td>17</td>
</tr>
<tr>
<td>Computer Science</td>
<td>317</td>
<td>292</td>
<td>222.5</td>
<td>264</td>
<td>187.5</td>
<td>233</td>
</tr>
<tr>
<td>Earth Sciences</td>
<td>9</td>
<td>11</td>
<td>6</td>
<td>12</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Economics</td>
<td>34</td>
<td>55.5</td>
<td>20</td>
<td>25</td>
<td>22</td>
<td>16.5</td>
</tr>
<tr>
<td>Mathematics and Statistics</td>
<td>14.5</td>
<td>23</td>
<td>6</td>
<td>16</td>
<td>7.5</td>
<td>10</td>
</tr>
<tr>
<td>Physics</td>
<td>8.5</td>
<td>17</td>
<td>3</td>
<td>4</td>
<td>3.5</td>
<td>2</td>
</tr>
<tr>
<td>Science</td>
<td>115</td>
<td>109</td>
<td>83</td>
<td>98</td>
<td>31</td>
<td>38</td>
</tr>
<tr>
<td>Total Faculty Enrolment</td>
<td>648.5</td>
<td>666.5</td>
<td>435.5</td>
<td>531</td>
<td>349</td>
<td>386.5</td>
</tr>
</tbody>
</table>

1 The year 2000 data were obtained from the On-line Fact Book, Fall USIS Head Count information Tables. The 2001 figures were obtained from Enrolment by Faculty and Primary Department for 2001F Only – SRSSTAT(E) 10/15/2001 – CRYSTAL-NT 20015, ARTSS.
of this change is relatively insignificant for most departments, but, as seen in Table 6, it makes a
dramatic difference for the Department of Economics where enrolment jumped from 39 in 1999
to 78.5 in 2000. Since enrolment data for the year 2001 were obtained from reports generated by
the Registrar’s office, to maintain consistency, the numbers for the Department of Economics
were adjusted to include their apportionment of the joint Business and Economics students.

As shown in Table 7, the increase in part time enrolment in the Faculty of Science is almost
totally attributable to an increase in the number of part time students in the School of Computer
Science.

An examination of full time undergraduate enrolment by academic level (Table 8) reveals some
interesting trends that are not apparent from overall enrolment figures by department. For
instance, while the School of Computer Science experienced an overall increase in enrolment,
the number of first year Computer Science students decreased. This is attributed to a substantial
increase in the number of students deciding to pursue computer science in second year.
Departments with notable increases over last year in the number of first year students are
Economics, Physics, Mathematics and Statistics, and Chemistry and Biochemistry. It is also
apparent from Table 8 that the majority of students in Computer Science are pursuing a three
year degree as evidenced by the drastic drop in the number of students between third and fourth
year, from 233 in 3rd year to 41 students in year 4.

**Semester Enrolment Units**

An often-used measure of the teaching and resource demands placed on a Faculty is the number
of semester enrolment units or SEUs. While an SEU, which is one student in one class, is seen
as a standard measure across the university, it is important to note that an SEU in a course with a
lab is quite different than for a course without a lab. SEU information for the Faculty and for
each Department are presented in Tables 9 and 10, respectively. It can be seen that not only has
the number of SEUs taught by the Faculty increased over the past several years, but the number
of SEUs in the Faculty as a percentage of total University SEU count, has increased from 22% to
over 25% as well. Departments experiencing the largest increase in the number of SEUs over
the past year are Mathematics and Statistics, Earth Sciences, and Computer Science.

**Table 9: Faculty of Science Semester Enrolment Units (Fall) 1996-2000\(^1\)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Faculty of Science</th>
<th>Overall University</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>11,814.5</td>
<td>53,328.5</td>
<td>22.0%</td>
</tr>
<tr>
<td>1997</td>
<td>11,622.5</td>
<td>49,277</td>
<td>23.5%</td>
</tr>
<tr>
<td>1998</td>
<td>11,302.5</td>
<td>48,228</td>
<td>23.4%</td>
</tr>
<tr>
<td>1999</td>
<td>11,771</td>
<td>48,474</td>
<td>24.2%</td>
</tr>
<tr>
<td>2000</td>
<td>12,667</td>
<td>49,582.5</td>
<td>25.5%</td>
</tr>
</tbody>
</table>

\(^1\) Data obtained from the On-line Fact Book, Student Enrolment in Semester Enrolment Units, University of
Windsor Student Enrolment History in SEU by Department, Fall.
Table 10: Semester Enrolment Units by Department (Fall) 1996-2000

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Sciences</td>
<td>2856</td>
<td>2539.5</td>
<td>1791</td>
<td>1910</td>
<td>1960</td>
</tr>
<tr>
<td>Chemistry and Biochemistry</td>
<td>1305</td>
<td>1294</td>
<td>1291</td>
<td>1196</td>
<td>1182</td>
</tr>
<tr>
<td>Computer Science</td>
<td>2713</td>
<td>3220</td>
<td>3781</td>
<td>4430</td>
<td>4684</td>
</tr>
<tr>
<td>Earth Sciences</td>
<td>561.5</td>
<td>517</td>
<td>428</td>
<td>384</td>
<td>791</td>
</tr>
<tr>
<td>Economics</td>
<td>1561</td>
<td>1390</td>
<td>1221</td>
<td>1233</td>
<td>1151</td>
</tr>
<tr>
<td>Mathematics</td>
<td>1964</td>
<td>1887</td>
<td>2112</td>
<td>1952</td>
<td>2234</td>
</tr>
<tr>
<td>Physics</td>
<td>631</td>
<td>671</td>
<td>543</td>
<td>600</td>
<td>585</td>
</tr>
<tr>
<td>Science</td>
<td>223</td>
<td>104</td>
<td>135</td>
<td>66</td>
<td>80</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>11,814.5</td>
<td>11,622.5</td>
<td>11,302</td>
<td>11,771</td>
<td>12,667</td>
</tr>
</tbody>
</table>

Degrees Conferred

In 2001, the total number of degrees awarded from the Faculty of Science was 488. The distribution by type of degree is shown in Table 11 and by Department in Table 12. Of the degrees conferred, 52% were General Bachelor of Computer Science degrees and 24% Bachelor of Science, General Science degrees.

Table 11: Degrees Conferred at the June 2001 and October 2001 Convocation Ceremonies

<table>
<thead>
<tr>
<th>Degree Conferred</th>
<th>Number</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of ScienceHonours</td>
<td>43</td>
<td>9%</td>
</tr>
<tr>
<td>Bachelor of Science4 Year</td>
<td>12</td>
<td>3%</td>
</tr>
<tr>
<td>Bachelor of Science General</td>
<td>112</td>
<td>24%</td>
</tr>
<tr>
<td>Bachelor of Science Double Major</td>
<td>4</td>
<td>1%</td>
</tr>
<tr>
<td>Bachelor of Science Honours Co-op</td>
<td>12</td>
<td>3%</td>
</tr>
<tr>
<td>Bachelor of Arts Honours</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Bachelor of Arts 4 Year</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Bachelor of Arts General</td>
<td>27</td>
<td>6%</td>
</tr>
<tr>
<td>Bachelor of Computer Science Honours</td>
<td>5</td>
<td>1%</td>
</tr>
<tr>
<td>Bachelor of Computer Science General</td>
<td>247</td>
<td>52%</td>
</tr>
<tr>
<td>Bachelor of Computer Science Co-op</td>
<td>7</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>488</td>
<td>100%</td>
</tr>
</tbody>
</table>

1 Data obtained from the On-line Fact Book, Student Enrolment in Semester Enrolment Units, University of Windsor Student Enrolment History in SEU by Department, Fall.
<table>
<thead>
<tr>
<th>Department</th>
<th>B.Sc. Honours</th>
<th>B.Sc. 4 Years</th>
<th>B.Sc. General</th>
<th>B.Sc. Double Major</th>
<th>B.Sc. Coop Honours</th>
<th>BA Honours</th>
<th>BA 4 Year</th>
<th>BA General</th>
<th>BCS Honours</th>
<th>BCS General</th>
<th>BCS Honours Coop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Sciences</td>
<td>14</td>
<td>10</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Biological Sciences and Psychology</td>
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<td></td>
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</tr>
<tr>
<td>Environmental Biology</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Chemistry and Biochemistry</td>
<td>3</td>
<td>2</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Chemistry</td>
<td></td>
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<td></td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>Chemistry and Physics</td>
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<td>1</td>
<td>7</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Science</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Science</td>
<td></td>
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<td></td>
<td></td>
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1 The figures represent the combined total of the degrees conferred at the June 2001 and October 2001 Convocation Ceremonies. The June 2001 data were obtained from the SRSCONV-PROGRAM YEAR 94 – PRESENT, Graduation Totals by Degree Program and Graduation Year. The October 2001 information was obtained from the Convocation Ceremonies Program.
**Board of Governors Medals**

At the June 2001 and October 2001 Convocation Ceremonies, the following students were recipients of a Board of Governors Medal in recognition of their scholastic in course achievement:

- Lawrence Aoun, Mathematics and Statistics
- Visha Patel, Biological Sciences
- Ada Lai, Science
- Ruth-Ann Stewart, Chemistry and Biochemistry
- Harsha Sree Malempati, General Science
- Sukhdev Singh Tur, Computer Science

**Dean’s Honour Roll**

Students who achieve an excellent academic record earn a place on the Dean’s Honour Roll. Those appearing on the list are a very select group of full time students who have completed at least ten courses at the University with a major and cumulative average of at least A- (11.0). The Dean’s Honour Roll has just been reinstated and so the lists for the 1998-1999, 1999-2000, and 2000-2001 academic years are included in this report. The Dean’s Honour Roll will also be laminated and displayed in the Office of the Dean.

**Undergraduate Research Awards**

**2001 NSERC Undergraduate Summer Research Award Recipients**

Few opportunities exist for undergraduate students to receive funding to pursue academic research. NSERC, through its Undergraduate Summer Research Award Program, provides financial assistance for successful applicants to conduct research for up to four months at an eligible Canadian university. Recipients of an USRA in the Faculty of Science were:

<table>
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<th>Biological Sciences</th>
<th>Supervisor</th>
<th>Chemistry and Biochemistry</th>
<th>Student Name</th>
<th>Superviser</th>
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<td>Sarah Brode</td>
<td>Dr. D. Heath</td>
<td>Karl Hauschild</td>
<td>Dr. R. Letcher</td>
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<tr>
<td>Christina Dakhill</td>
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<td>Jason Kerr</td>
<td>Dr. S. Ananvoranich</td>
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<tr>
<td>Christine Drummond</td>
<td>Psych/Biological Sc.</td>
<td>Julianna Li</td>
<td>Dr. K. Taylor</td>
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<td>Harsha Malempati</td>
<td>Dr. D. Stephan</td>
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<td>Dr. M. Crawford</td>
<td>Allison Nantais</td>
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<td>Neal Parekh</td>
<td>Dr. S. Loeb</td>
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<td>William McCormick</td>
<td>Dr. M. Crawford</td>
<td>Parha Paul</td>
<td>Dr. S. Loeb</td>
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<tr>
<td>Andrea Pamula</td>
<td>Dr. A. Hubberstey</td>
<td>Thomas Quach</td>
<td>Dr. B. Mutus</td>
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<tr>
<td>Mr. Jayesh Patel</td>
<td>Dr. D. Cotter</td>
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<tr>
<td>Vishal Patel</td>
<td>Dr. A. Hubberstey</td>
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<td>Mouhannad Sadek</td>
<td>Dr. A. Hubberstey</td>
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<td>Matthew Shaw</td>
<td>Dr. A. Warner</td>
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<td>Cortney Smith</td>
<td>Dr. B. Zielinski</td>
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<td>Steven Sovran</td>
<td>Dr. L. Lovett-Doust</td>
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<tr>
<td>Katie Stammmer</td>
<td>Dr. L. Corkum</td>
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<td>Stephen Walker</td>
<td>Dr. M. Dufresne</td>
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</table>

**Computer Science**

- Alison Pridham
- Dr. C. Ezeife

**Mathematics and Statistics**

- Lawrence Aoun
- Dr. P. Kaloni
Nevine Abdul-Kader
Jenny Lynn Amlin
Ambika Aneja
Lawrence Aoun
Wissam Assaily
Meghan Beatty
Jenny Lynn Boismier
Joseph Borbely
Julianna Borbely
Fay Lynn Broadwell
Lana A. Castellucci
Allison Cator
Patrick Cervini
Steven J. Chovanec
Sean P. Collins
David M. Cook
Christina Dakhil
Marisa Di Nardo
Tung M. Diep
Michelle Diane Doerksen
Isabelle Drouin-Brisebois
Kevin Durda
Ken Egervari
Amanda Dawn Ellwood
Sandeep Ghai
William Glass
Scott Matthew Hallett
Karl E. Hauschild
Gabriella Henel
Pui Hei Hung
Ayesha Hussain
Farah Hussain
Nevin Sim Huynh
Sanjay Michael Jacob
Jeremy Richard Jennings
Charles Franklin Johnson
Sudhanshu Juneja
Marisol Kcomt
Jason Andrew Kerr
Juliane Elaine Kirby
Ursula Kisiel
Nikolaos Koutelas
Byron James Larsen
Jamie C. Liu
Noreen Bik-Gee Lum
Lisa L. Mac Donald
Shavaun Irene MacDonald
Harsha Sree Malempati
Charles Patrick Malone
Rachel Sophia Martin
Jasvir K. Marwaha
Carolyn Matkovich
Thomas B. McGregor
Jakov Moric
Allison Nantais
Thanh Q. Nguyen
Shuling Nie
Angela Novena
Andrea Pamula
Neal Parekh
Vishal Patel
Partha P. Paul
Elisabetta Raco
Ripudamanlall Ramlall
Gabriel Schulhof
Ognjen Senic
Uma Devi Shastri
Keith R. Shaw
Matthew Shaw
Courtney May Smith
Nidhi Sood
Katie L. Stammler
Mark Warren Stewart
Ruth-Ann Feliksa Stewart
Ning Sun
Amy R. Sydor
Wilson Tang
Piero Tartaro
Jasmine Thais Taylor
Nicolas Teeuwen
Gabor Gyorgy Timis
Benedict O. Ukonga
Sarah Jane Vella
Laura Voltic
Mathew Willans
Hua Zhu
Faculty of Science
DEAN’S HONOURS ROLL
1999-2000

Jenny Lynn Amlin
Ambika Aneja
Lawrence Aoun
Meghan Beatty
Krishna Kumar Bhotika
Rachel Blair
Jenny Lynn Boismier
Joseph Borbely
Juliana Borbely
Sarah Brode
Lana A. Castellucci
Shelley Charbonneau
Ka Chun Kenneth Cheung
Navneet Chhajer
Steven J. Chovanec
Ryan Craig
Christina Dakhil
John K. Devlin
Tung M. Diep
Michelle Diane Doerksen
Christine R. Drummond
Amanda Dawn Ellwood
Mark Esping
Yaa Fordjour
Sandeep Ghai
Scott Matthew Hallett
Karl E. Hauschild
Xun He
James Henderson
Gabriella Henel
Karen Ann Howson
Pui Hei Hung
Farah Hussain
Nevin Sim Huynh
Susanna Ivanovics
Scott D. Jahn
Kenneth W. Jean
Zora Juricic
Litsa Karaouzas
Marisol Kcomt
Jason Andrew Kerr
Ursula Kisiel
Nikolaos Koutelas
Chunhua Li
Jing Juliana Li
Christopher Lopez
Lisa L. Mac Donald
Shavaun Irene MacDonald
Harsha Sree Malempati
M. Riadul Mannan
Rachel Sophia Martin
Carolyn Matkovich
Scott Mayer
William McCormick
Thomas B. McGregor
Aleksandar Milosevic
William Brent Mowbray
Allison Nantais
Thanh Q. Nguyen
Angela Novena
Andrew D. Ostropolec
Laura C. Palombo
Andrea Pamula
Neal Parekh
Jayesh Patel
Vishal Patel
Partha P. Paul
Alison Marie Pridham
Thomas Quach
Mark Quimby
Mouhannad M. Sadek
Emmanuel Schembri
Uma Devi Shastri
Keith R. Shaw
Matthew Shaw
Junqiang Shi
Nan Shi
Branko Simeunovic
Sean Michael Sinasac
Pushpinder Deep Singh
Courtney May Smith
Nidhi Sood
Steven Sovran
Katie L. Stammler
Mark Warren Stewart
Ruth-Ann Feliksa Stewart
Suganthan Subramaniam
Amy R. Sydor
Venu Tadiboyina
Michael Tenzer
Tomce Trajkovski
Benedict O. Ukonga
Brooke Van Beek
Sarah Jane Vella
Stephen Lee Walker
Weishu Wei
Sherri Renee Wheeler
Sonya Jean Wheeler
Ying Ying Zhao
Hua Zhu
Faculty of Science
DEAN’S HONOUR ROLL
2000-2001

Lawrence Aoun
Michael Frank Bencak
Joseph Borbely
Brendan Brode
Sarah Brode
Stephen Brush
Jonathan Casey
Shelley Leah Charbonneau
Trevor Childs
Vivian Yun Wen Chow
Denton Kaniel Cockburn
Christina Dakhil
Marisa D’Alessandro
John K. Devlin
Karan Dhami
Michelle Diane Doerksen
Christine R. Drummond
Mandy Dumouchelle
Kevin Durda
Alisha Dyck
Amanda Dawn Ellwood
Mark Esping
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Donald Gammon
Miguel Garcia
Sandeepr Ghai
Cynthia Gignac
Karl E. Hauschild
James Aaron Herzog
Amanda Cheryl Hines
Karen Ann Howson
Pui Hei Hung
Fatima Hussain
Shahid Iqbal
Scott D. Jahn
Prachi Jain
Benjamin John Johnson
Jason Jolicoeur
Zora Juricic
Litsa Karaouzas
Erick Roger Karpinski
Jason Andrew Kerr
Shakil Mahmud Khan
Ursula Kiesel
Nikolaos Koutelas
Gaurav Kumar
Ada Lai
Nancy Nhu Lam
Justin Lariviere
Robert James L’Ecuyer
Kristina Levang
Chunhua Li
Jing Juliana Li
Wenjun Lin
Christopher Lopez
Diana W. Mak
Harsha Sree Malempati
Aubri D. Marchand
Rachel Sophia Martin
Camillia Faye Matuk
Scott Mayer
William McCormick
Jessica McLachlan
Lakshmi Meenakshisundaram
Aleksandar Milosevic
William Mowbray
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Snezana Ninkovich
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Jayesh Patel
Vishal Patel
Partha P. Paul
Melissa Anne Piercell
Alison Marie Pridham
Thomas Quach
Mark Quimby
Ayesha Rahman-Sahukhan
Jessica Lori Riley
Muhammad Riyadh
Derek Sidney Ryzebol
Mouhammad M. Sadek
Emmanuel Schembri
Dana Seslija
Uma Devi Shastri
Matthew Shaw
Harjit Shergill
Yingnian Shuai
Cortney May Smith
Nidhi Sood
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Iga Maria Stasiak
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Julie Szalkai
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Sabahat Hayat Theem
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Monika C. Urbanski
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Stephen Lee Walker
Sherri Renee Wheeler
Sonya Jean Wheeler
Cory Michael Widdifield
Shuhong Yang
Mingyue Yu
Carmen Zannier
Xiurong S. Zhang
Ying Ying Zhao
The following new programs have ensued from the five year planning process undertaken by Departments within the Faculty of Science as part of the University’s strategic planning initiatives.

**Biotechnology Programs**

The Faculty of Science will offer two programs in biotechnology with entry into first year commencing September 2002. The programs are: a Bachelor of Science in Biology and Biotechnology and a Bachelor of Science in Biochemistry and Biotechnology. Both will share state of the art laboratory facilities. Biotechnology is a broad area of applied science that, if thoughtfully developed and practiced, shows great promise for improving human health and welfare.

**Environmental Science Program Changes**

The Department of Earth Sciences is assuming responsibility for a redesigned Bachelor of Science Degree program in Environmental Science and for a new Bachelor of Science in Geoinformatics. Previously, Environmental Science was a multidisciplinary program administered out of the office of the Dean of Science. The revised program will focus on the technical and scientific aspects of environmental protection and is basically a triple-major program involving geology, physical geography and biology with flexibility in the first two years for students to choose one of these three streams to complete the degree. The Geoinformatics program is an interdisciplinary program in Earth and Computer Sciences and is designed to train students with skills in these areas in the acquisition, manipulation and interpretation of geospatial data using GIS and remote sensing techniques. Both programs will commence in September 2002.

The Bachelor of Science in Geology and the Bachelor of Science in Environmental Geology have also been redesigned to meet criteria for professional licensure.

**Bachelor Of Mathematics**

As of September 2001, the Department of Mathematics and Statistics replaced its Bachelor of Arts (Mathematics) and Bachelor of Science (Mathematics) with general and honours Bachelor of Mathematics degrees as well as a Bachelor of Mathematics (Honours Mathematics and Statistics and Honours Mathematics and Computer Science). The new programs build on the strengths of the department and highlight the unique nature of mathematics. Bachelor of Mathematics students will acquire an understanding of classical and modern analysis, linear and modern algebra, probability and statistics and will develop skills in analytical thinking, deductive reasoning, problem solving, mathematical modelling and computational technique. Prospective teachers will have an advanced understanding of all mathematical topics covered in school curricula. Some graduates may become professional statisticians or prepare for professional actuarial examinations.
Bachelor of Operational Research

In the fall of 2002, the Department of Mathematics and Statistics will begin offering a degree in Operational Research. Operational Research is the science of decision-making. It provides systematic and general approaches to problem-solving and decision-making, regardless of the nature of the system, product or service. The program, to be the second of its kind in Canada, is to have a co-op education component. Interest in placing co-op students from the program has already been expressed by areas as diverse as a local freight company, the Department of Defence, and a major telecommunications company. From a foundation in Mathematics and Statistics, students will learn theories, solutions and techniques developed for application in business, industry and government. The challenging program structure has 36 required courses that will be taught by instructors from mathematics, statistics, economics, industrial engineering, management science in the Odette School of Business, and from Computer Science, particularly faculty who work in artificial intelligence.
Overview

It is with the education of graduate students that the dual roles of professors to teach and research converge to a single activity. Professors ensure that graduate students experience and learn of the latest innovations and discoveries, and graduate students work alongside professors to help push the frontiers of knowledge. In addition, graduate students play an important role in the teaching of undergraduate students through the supervision of labs and tutorials, the marking of tests and exams, and through one-on-one mentoring; and are an important part in the social fabric of a department.

Table 13: Full Time Graduate Student Enrolment (Fall) 1996-2001

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Table 14: Part Time Graduate Student Enrolment (Fall) 1996-2001

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<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Physics</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>1</td>
<td>8</td>
<td>1</td>
<td>7</td>
<td>2</td>
</tr>
</tbody>
</table>

1 Prior to 2001, data were obtained from the On-line Fact Book, Fall USIS Head Count information Tables. The 2001 figures were obtained from Enrolment by Faculty and Primary Department for 2001F Only – SRSSTAT(E) 10/15/2001 – CRYSTAL-NT20015, ARTSS.
### Table 15: Full Time Graduate Student Enrolment by Department and Gender 1996-2000

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% &amp; %</td>
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<td>% &amp; %</td>
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<td>% &amp; %</td>
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<td>% &amp; %</td>
<td>&amp;</td>
<td>% &amp; %</td>
<td>&amp;</td>
</tr>
<tr>
<td>Biological Sciences</td>
<td>13</td>
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<td>5</td>
<td>5</td>
<td>12</td>
<td>4</td>
<td>3</td>
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<td>5</td>
<td>2</td>
<td>2</td>
<td>13</td>
<td>9</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Chemistry and Biochemistry</td>
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<td>5</td>
<td>12</td>
<td>6</td>
<td>14</td>
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<td>9</td>
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<td>7</td>
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<td>7</td>
<td>11</td>
<td>7</td>
<td>11</td>
<td>6</td>
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<tr>
<td>Computer Science</td>
<td>26</td>
<td>10</td>
<td>-</td>
<td>-</td>
<td>35</td>
<td>11</td>
<td>-</td>
<td>-</td>
<td>33</td>
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<td>-</td>
<td>52</td>
<td>25</td>
<td>-</td>
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<tr>
<td>Earth Sciences</td>
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<td>4</td>
<td>-</td>
<td>-</td>
<td>12</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>9</td>
<td>-</td>
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<td>8</td>
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<tr>
<td>Economics</td>
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<td>5</td>
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<td>-</td>
<td>6</td>
<td>6</td>
<td>-</td>
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<td>7</td>
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<td>Physics</td>
<td>11</td>
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<td>3</td>
<td>-</td>
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<td>23</td>
<td>12</td>
<td>96</td>
<td>34</td>
<td>19</td>
<td>8</td>
<td>80</td>
<td>31</td>
<td>22</td>
<td>9</td>
<td>110</td>
<td>51</td>
<td>25</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>115</td>
<td>35</td>
<td>130</td>
<td>27</td>
<td>111</td>
<td>31</td>
<td>161</td>
<td>33</td>
<td>173</td>
<td>38</td>
<td>115</td>
<td>35</td>
<td>130</td>
<td>27</td>
<td>111</td>
<td>31</td>
</tr>
</tbody>
</table>

1 Data obtained from the On-line Fact Book, Fall USIS Head Count information Tables.
As shown in Table 13, the number of full time graduate students currently pursuing a Master’s or Doctoral degree in programs offered by the Faculty of Science is 175 and 41, respectively – a slight increase over last year’s enrolment. Computer Science has the most Master’s students (74 or 42%) with the Department of Chemistry and Biochemistry having the most Doctoral students (18 or 44%). Only 12 graduate students are pursuing a degree on a part time basis. (Refer to Table 14.)

The distribution of full time graduate students by department, program and gender is provided in Table 15. It is interesting to note that 66% of the Master’s students and 87% of the Doctoral students are male.

---

**Degrees Conferred by the Faculty of Graduate Studies**

At the Convocation Ceremonies in June and October 2001, 53 Master of Science, 10 Master of Arts, and 7 Doctor of Philosophy degrees were awarded. The distribution by type is provided in Table 16.

**Table 16: Degrees Conferred at the June 2001 and October 2001 Convocation Ceremonies (MA, MSc., and Doctor of Philosophy)**

<table>
<thead>
<tr>
<th>Degree Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.Sc. Biological Sciences</td>
<td>9</td>
</tr>
<tr>
<td>M.Sc. Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>M.Sc. Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td>M.Sc. Computer Science</td>
<td>31</td>
</tr>
<tr>
<td>M.A. Economics</td>
<td>10</td>
</tr>
<tr>
<td>M.Sc. Geology</td>
<td>4</td>
</tr>
<tr>
<td>M.Sc. Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>M.Sc. Physics</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>63</td>
</tr>
<tr>
<td>Ph.D. Biological Sciences</td>
<td>1</td>
</tr>
<tr>
<td>Ph.D. Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>Ph.D. Physics</td>
<td>1</td>
</tr>
<tr>
<td>Ph.D. Statistics</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
</tr>
</tbody>
</table>
Physics Ph.D. graduate Gregory James Trayling is the Governor General's Gold Medal Winner for 2000-2001. The award is given to the top graduating graduate student. Dr. Trayling completed his Ph.D. in Physics under the supervision of Dr. William Baylis and is described as being among the top one or two students who have graduated from the Department in the last twenty years and a worldwide leader in his specialty.

Dr. Trayling's theoretical research has developed a revolutionary new approach to particle physics. He adds new dimensions to the basic theory describing how the four fundamental forces define all phenomena in the universe. Instead of thinking in three dimensions, his equations use four, five or six. After extensive discussions with journal referees, his new approach to fundamental physics is now being accepted as a viable alternative to the standard model. It is expected that his work will have a profound impact on the field of elementary particle interactions. Dr. Trayling currently holds a post-doctoral fellowship in the Department of Physics at the University of Windsor but he expects to accept one of many offers of a full-time faculty position, most likely at a university near his home on the west coast.

The ability of our graduate students to attract external scholarships is one of many indications of the strength of our graduate programs. Below is a list of provincial and national scholarship winners.

**Ontario Graduate Scholarships (OGS)**

The Ontario Graduate Scholarship (OGS) program is designed to encourage excellence in graduate studies at the master’s and doctoral levels. Winners of this province-wide competition receive $15,000 for three consecutive terms. The province of Ontario contributes two-thirds of this amount and the university provides one-third. The following students were recipients of an Ontario Graduate Scholarship in 2001-2002:

- Sarah Bandoni, Biological Sciences
- Farhad Khosrowshahian, Biological Sciences
- Chantelle Bondy, Chemistry and Biochemistry
- Silke Courtenay, Chemistry and Biochemistry
- Mark Cassar, Physics

**Ontario Graduate Scholarships in Science and Technology (OGS)**

Unlike the Ontario Graduate Scholarships, the Ontario Graduate Scholarships in Science and Technology are administered by the university. The OGSST are funded by the Province matching at a 2:1 ratio new monies contributed by the private sector (businesses, organizations or individuals) to a maximum total scholarship value of $15,000 per year. The following students were recipients of an OGSST in 2001-2002.
Graduate Funding and Scholarships

Paul Chittaro  Biological Sciences
Liam Spencer  Chemistry and Biochemistry
Monique Verhaegen  Chemistry and Biochemistry
Yi Lu  Computer Science
Ying Zhou  Computer Science
Krishna Saha  Mathematics and Statistics
David Keselica  Physics

Natural Sciences and Engineering Research Council of Canada (NSERC)
Post Graduate Scholarships

NSERC provides financial support to high-calibre students of the natural sciences or engineering who would like to further their research goals by undertaking studies at the master's or doctoral level. The Postgraduate Scholarships (PGS) program offers grants for the first and second or second and third years of graduate study (PGSA); for the third and fourth or fourth and fifth years of graduate study (PGSB); as well as a Postdoctoral Fellowship. The following graduate students are recipients of an NSERC award:

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Type of Grant</th>
<th>Department</th>
<th>Discipline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lawrence Aoun</td>
<td>PGSA</td>
<td>Mathematics and Statistics</td>
<td>Applied Mathematics</td>
</tr>
<tr>
<td>Julianna Borbely</td>
<td>PGSA</td>
<td>Biological Sciences</td>
<td>Aquatic Ecology And Limnology</td>
</tr>
<tr>
<td>Niroshan Ramachandran</td>
<td>PDF</td>
<td>Chemistry &amp; Biochemistry</td>
<td>Biochemistry (Harvard Medical School)</td>
</tr>
</tbody>
</table>
Universities have a social responsibility to create, acquire and disseminate knowledge. This responsibility is met in the Faculty of Science through its emphasis on the importance of research activity and research output. The Faculty of Science is fortunate to have a compliment of nationally and internationally recognized scientists who undertake a wide range of research programs and attract significant amounts of external funding from a variety of Federal and Provincial agencies as well as through grants from the private sector. In the past year, the professors in the Faculty of Science received an annual commitment in external funding in excess of $20 million in support of its research, published over 225 articles in refereed journals, and won many distinctions.

**Research and Scholarship Excellence**

The 2nd Annual University of Windsor Celebration of Research and Scholarship Excellence was held in September 2001 to honour faculty members who have made outstanding contributions to their fields and to the University. The increase in University research support over the past year from $10 million to $17 million was due, in no small part, to on-going research in the Faculty of Science. Of the 22 faculty recognized at the celebration, 16 were from the Faculty of Science. Honorees are pictured below and a brief description of their research contribution follows.

First Row L-R: Peter Frise, Maria Cioppa, Adnan Ali, Siyaram Pandey, Roman Maev, Sirinart Ananvoranich
Second Row L-R: Dan Heath, Rob Letcher, Doug Stephan, Alistair MacLeod
Third Row L-R: Ron Frisch, Hugh MacIsaac, Peter Sale, Steve Loeb, Barry Adam
Back Row L-R: David Fowle, Byron Rourke, Doug Haffner, Brian Fryer, Phil Graniero,
Absent: Mike Kral, Jan Ciborowski
Industrial Research Chairs

Dr. Roman Maev, Department of Physics and Director of the Centre for Imaging Research and Advanced Materials Characterization, was recently named as the NSERC/Daimler Chrysler Industrial Research Chair in Applied Solid State Physics and Material Characterization. The Chair has been organized to establish a world-class centre for research in, and the development of, new high-frequency acoustic and acousto-optic imaging systems. The new Chair is an important component of a unique and growing industry-university partnership between one of Canada’s leading automakers and the University with a key focus in Manufacturing Studies. The total investment of the collaboration is 2.85 million over the initial five years of the Chair.

Dr. Douglas Stephan, Department of Chemistry and Biochemistry, has been named Chair of the NSERC/NOVA Industrial Research Chair in Polymerization Catalysis. The research program for the Chair will lead to the development of a new class of highly active, single-site catalysts for polymerization of ethylene. The total investment of the collaboration exceeds $3.5 million over the initial five years of the Chair.

Canada Research Chair (CRC) Award Winners

The federal government recently founded a funding program called the Canada Research Chairs. The CRC promotes leading-edge research and innovation, providing exciting opportunities to attract and retain the best research minds in the world to Canadian universities. Three Faculty of Science professors have been recognized as leaders and innovators in their respective fields of study and named Canada Research Chairs.

Dr. Douglas Haffner, of the Department of Biological Sciences and member of GLIER, was awarded a Canada Research Chair for Great Lakes Research (Environmental Health), NSERC, Tier I. Dr. Haffner has pioneered methods to measure the impact of contaminants in natural waterways on the environment and on humans. In support of this research chair, the university will receive $200,000 a year for seven years from the Federal government CRC program. The Canadian Foundation for Innovation (CFI) will provide an additional $125,000 toward creating an aquatic facility for quantifying dose-response mechanisms.

Dr. Stephen Loeb, Department of Chemistry and Biochemistry, was named Canada Research Chair in Supramolecular Chemistry and Fundamental Materials, NSERC, Tier I. Dr. Loeb has pioneered the use of metallo receptors for molecular recognition. This is applied to developing new chemical processes and materials for industrial applications and pollution control. The university will receive $200,000 a year for seven years to support this chair. In addition, CFI is providing $144,000 for an electrospray ionization time-of-flight mass spectrometer.

Dr. Daniel Heath, of the Department of Biological Sciences and member of GLIER, is a Canada Research Chair in Conservation Genetics, NSERC, Tier II. Dr. Heath's research applies to improving fish stock management including harvesting and revitalizing commercial fishing. An expert in conservation genetics, he has developed novel techniques for the use of molecular genetic markers for population genetic studies of fish stocks. The university receives $100,000 a year for five years to support this chair and CFI is providing an additional $125,000 to equip his Great Lakes conservation genetics laboratory.
Canada Foundation for Innovation (CFI) Award Winners

Canada Foundation for Innovation funding gives researchers access to equipment and facilities needed to put creativity to work and strengthen Canada's global research leadership. The University of Windsor was highly successful in 2001 in obtaining several CFI grants valued at more than $2,800,000, with matching grants from the Ontario Innovation Trust. This year's CFI award winners are:

Dr. Adnan Ali, Department of Biological Sciences, assumed a CFI research project for his groundbreaking research in *Using Microarrays to Understand the Regulation of Cell Signaling*. The predominant aim of his work is to understand the processes of cell adhesion, differentiation and apoptosis and will assist in understanding the development of cancer.

Dr. Sirinart Ananvoranich and Dr. Siyaram Pandey, Department of Chemistry and Biochemistry, received a New Opportunities Fund in the amount of $416,696 for Biochemical and proteomics facilities for the study of human diseases and aging using a cellular model system. Drs. Pandey and Ananvoranich use human neuronal cells in vitro as a model to study the mechanisms of age-related neurodegenerative diseases in humans. The CFI Award will provide state-of-the-art instruments for proteomics research, as well as other medical biochemistry research, and enlarge their lab to accommodate up to 12 more researchers and students.

Dr. David Fowle of the Department of Earth Sciences and member of GLIER, was awarded $199,850 for a Facility for the Study of Nanoscale Mineral-Bacteria Contaminant-Water Interactions. The infrastructure will establish a world-class Biogeochemistry facility at GLIER for environmental research. Dr. Fowle will explore the effects of bacteria and nanoscale minerals, which are extremely small mineral particles, on the mobility and bioavailability of toxic metals in the environment.

Dr. Phil Graniero, Department of Earth Sciences, was awarded a CFI New Opportunities Fund in the amount of $97,686, for his project entitled An Integrated Field Acquisition and Modeling Facility for the Study of Hydrologic Interactions in Patchy Environments, from Point to Catchment Scales. The funding will be used to purchase equipment for a lab that will measure not only the quantity and quality of water in natural systems, but at much finer spatial detail for use in geographic information systems and environmental models.

Dr. Robert Letcher, of the Department of Chemistry and Biochemistry and member of GLIER, received a CFI New Opportunities Fund in the amount of $199,679 for Laboratory infrastructure for Interdisciplinary Research on the Environmental Chemistry, Biotransformation and Endocrine Toxicology of Anthropogenic Compounds. Dr. Letcher’s research involves the study of compounds in the environment that behave like hormones, potentially affecting reproduction, growth and other processes in human as well as other species.

Dr. Angela Sodan, School of Computer Science, received a CFI New Opportunities Fund in the amount of $66,450 for Efficient Scalable and Intelligent Scheduling in Heterogeneous Parallel Systems. With the opportunity to receive matching funds from the Ontario Innovation Trust, and an IBM in-kind contribution, the value of the award is $166,125 for an IBM cluster with Myrinet and a second experimental network.

The Canada Research Chair Award Winners also received the CFI portion of their research programs.
NSERC Collaborative Research Opportunity

Dr. Peter Sale, Department of Biological Sciences and member of GLIER, received a $492,000 Collaborative Research Opportunity grant from NSERC for his project Regional Scale ecological connections among reefs: an interdisciplinary, international collaborative research program for the meso-american reef tract. The project, known as Econar (Ecological Connections Among Reefs) seeks to determine the extent of dispersal of larval fishes among local populations. Dr. Sale’s co-investigators are: Drs. Brian Fryer and Dan Heath from the University of Windsor, Dr. Brian Dixon at the University of Waterloo, and Drs. Bruce Hatcher, Barry Ruddick and Jinyu Sheng at Dalhousie University. All Collaborative Opportunity Grants are interdisciplinary and all include international partners. Dr. Sale is collaborating with the World Bank in Mexico, Belize, Guatemala and Honduras.

NSERC University Faculty Award – Dr. Maria Cioppa

The NSERC University Faculty Awards Program was designed to increase the representation of women and Aboriginal peoples in faculty positions in the natural sciences and engineering by encouraging Canadian universities to appoint promising researchers in those groups to tenure track positions. Competition for these awards was fierce and the success rate was only 52%. Dr. Maria Cioppa in the Department of Earth Sciences is a recipient of this prestigious award and will have her salary and research costs contributed to by NSERC.

Fellow of the Royal Society

Dr. Brian Fryer, of the Department of Earth Sciences and Interim Director of GLIER, has been named a 2001 New Fellow elected to the Academy of Science in Earth, Ocean and Atmospheric Sciences for the Royal Society of Canada. Fellowship in the RSC is considered Canada’s senior academic accolade to which scholars and scientists aspire. Dr. Fryer pioneered the development of a technique that has revolutionized chemical analysis of Earth materials and has applied this technique to many fundamental geological problems. The technique is known as Laser-Ablation Inductively Coupled Plasma Mass-Spectrometry. At the University of Windsor, Dr. Fryer applies his technique to his work on trace minerals and sources of pollution in the Great Lakes. Using Detroit River sediments, he looks at the transfer of chemicals such as mercury and cadmium from sediments into and through the food chain. His techniques are able to trace ultra low concentrations as he works with biologists and other scientists to understand the transformation process in nature. Dr. Fryer is the third member of the Faculty of Science to be named an RSC Fellow. The induction ceremony will take place in November 2001.

Ontario Innovation Trust

The Ontario Innovation Trust approved matching grant funds in support of the CFI projects listed above.

Ontario Research and Development Challenge Fund (ORDCF)

Dr. Gordon Drake, Department of Physics, acted as Principal Researcher on behalf of the University of Windsor in preparing a successful CFI/ORDCF application for a major new computing facility. The Shared Hierarchical Academic Research Computing Network (SHARC-Net) is a university partnership involving the University of Windsor in collaboration with the Universities of Guelph, McMaster, Western Ontario, and Wilfred Laurier, plus Sheridan College.
and Fanshaw College. A grant of more than $8 million from the ORDCF is the final piece of support needed to create the new $42 million network of Compaq Alpha machines located at each campus. The University of Windsor’s share is $260,000. Our two local ES40 machines, with four parallel processors each, provide a major computing facility that will benefit all researchers on campus, and the larger SHARC-Net connectivity gives us access to one of the most powerful distributed computing facilities in North America. Other participants involved in the project from the Faculty of Science are Dr. Robert Kent, School of Computer Science and Dr. Mordechay Schlesinger, Department of Physics. In addition, faculty members will have ongoing opportunities to apply for Research Fellowships, and support for Senior Visiting Fellows, Postdoctoral Fellows, Graduate Fellows, and Undergraduate Fellows.

Dr. Douglas Stephan, Department of Chemistry and Biochemistry and NSERC/NOVA Chemicals Industrial Research Chair in Polymerization Catalysis, was awarded a ORDCF in excess of $1.2 million for the Centre of Catalysis and Materials Research. Dr. Stephan’s team of researchers is involved in leading edge research relating to new production and materials technologies that will allow Ontario industries to maintain their competitive edge in the marketplace.

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### Research Honours and Awards

**University of Windsor Awards for Excellence in Scholarship and Research**

These awards were established by Dr. A. Alfa, Associate Vice-President, Research to raise the profile of the research culture at the University of Windsor by recognizing achievements of excellence in scholarship and research. One award is available annually for a senior professor and up to four are available for newer members of faculty. The 2000 winner in the senior category was Dr. Gordon Drake, Department of Physics. Dr. David Antonelli, Department of Chemistry and Biochemistry, was one of the winners in the junior category. Dr. Drake received $4,000 with his certificate and Dr. Antonelli received $2,000. The Alumni and Development Office provided the funds for the awards.

**Other Honours and Awards**

At the annual conference of the Canadian Society of Chemists in May 2001, Department of Chemistry and Biochemistry Professor Dr. Douglas Stephan was honoured as the recipient of the Alcan Award. The award is given to a scientist who has made distinguishing contribution in the fields of Inorganic Chemistry or Electrochemistry while working in Canada. The Alcan Award Lecture delivered by Dr. Stephan was entitled: “Early Transition Metal Chemistry: Fundamental Research Industrial Application and Back Again”.

During a site visit by officials from the Natural Sciences and Engineering Research Council of Canada and DaimlerChrysler, Physics Professor Dr. Roman Maev was presented a framed letter from Frank Ewasysyn, senior vice-president Advanced Manufacturing Engineering, DaimlerChrysler Minivan Operations in recognition of Dr. Maev’s “major achievement in the design, development and prototype build of a Non Destructive Spotweld Quality Analyzer.” The work of Dr. Maev and his team will provide a benchmark for the Automotive Industry and will permit significant cost reductions and gains in quality and productivity.
In July 2001, Earth Sciences Professor Dr. Iain Samson was awarded the Julian Boldy award. This is an award given by the Mineral Deposits Division of the Geological Association of Canada for the best mineral deposit/mineral exploration papers presented at the Annual Meeting. Dr Samson received this award for his talk entitled: "Constraints on the origin of fluids responsible for Irish-Zn-Pb-barite deposits: Evidence from the chemistry of fluid inclusions" coauthored by D.A. Banks and A.J. Boyce.

A research paper authored by, among others, Drs. Myron Hlynka and Karen Fung, Department of Mathematics and Statistics, et al, won an award for excellence at 12th World Congress of Disaster and Emergency Medicine held in May 2001 in Lyon, France. The paper entitled, Rapid Defibrillation: A Comparison of Prehospital Cardiac Arrest Victim Survival Rates was selected the best overall out of more than 270 submissions, representing 33 countries.

In 2000, Dr. Ramo Gencay, Department of Economics, received the Young Scientist Award of the Turkish Academy of Sciences.

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**NSERC Research Grants**

The Natural Sciences and Engineering Research Council of Canada (NSERC) is the major source of funding for on-going research within the Faculty of Science. This is mostly in the form of individual annual research grants. Excluding new faculty who are awaiting results from the current competition, and those that are not eligible for NSERC funding, 81% of faculty have research programs supported by NSERC in the amount of about $1.8 million dollars. This represents an increase of almost 16% over the amount of annual funding received in 2000. Additional NSERC funding is provided in the form of equipment grants. The annual amount of NSERC monies received by Department, in terms of individual research grants, is provided in Table 17. A listing of individual NSERC grant recipients follows.

**Table 17: NSERC Research Grants**

<table>
<thead>
<tr>
<th>NSERC Annual Research Grants</th>
<th>2000</th>
<th>2001</th>
<th>% Change</th>
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</thead>
<tbody>
<tr>
<td>Biological Sciences</td>
<td>$362,141</td>
<td>$370,513</td>
<td>2.3%</td>
</tr>
<tr>
<td>Chemistry and Biochemistry</td>
<td>$357,799</td>
<td>$497,184</td>
<td>38%</td>
</tr>
<tr>
<td>Computer Science</td>
<td>$315,883</td>
<td>$356,485</td>
<td>13%</td>
</tr>
<tr>
<td>Earth Sciences</td>
<td>$114,912</td>
<td>$175,900</td>
<td>53%</td>
</tr>
<tr>
<td>Economics</td>
<td>$17,000</td>
<td>$17,000</td>
<td>-</td>
</tr>
<tr>
<td>Mathematics and Statistics</td>
<td>$167,310</td>
<td>$173,645</td>
<td>3.8%</td>
</tr>
<tr>
<td>Physics</td>
<td>$237,950</td>
<td>$236,765</td>
<td>-0.5%</td>
</tr>
<tr>
<td>Total</td>
<td>$1,572,995</td>
<td>$1,827,492</td>
<td>16.2%</td>
</tr>
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</table>
## NSERC Research Grants 2001 – 2002 (Annual Amounts)

<table>
<thead>
<tr>
<th>Group Code</th>
<th>Research Area</th>
<th>Amount 1</th>
<th>Amount 2</th>
<th>Principal Investigator 1</th>
<th>Principal Investigator 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSC 6</td>
<td>Civil Engineering</td>
<td>$18,000</td>
<td>$17,325</td>
<td>Dr. Keith Taylor</td>
<td>Dr. Peter Hudec</td>
</tr>
<tr>
<td>GSC 8</td>
<td>Solid Earth Sciences</td>
<td>$28,000</td>
<td>$21,400</td>
<td>Dr. Maria Cioppa</td>
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<td>Dr. William McConkey</td>
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<td>$28,750</td>
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<td>Dr. Siyram Pandey</td>
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<td>Dr. Michael Dufresne</td>
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<td>Dr. Andrew Hubberstey</td>
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<td>$22,050</td>
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<td>Dr. Lana Lee</td>
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### NSERC Research Grants

#### GSC 33 – Molecular and Developmental Genetics

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#### GSC 330 – Computing and Information Systems A

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<td>Dr. Akshai K. Aggarwal</td>
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<td>$16,500</td>
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<td>$18,480</td>
<td>Dr. Subir Bandyopadhyay</td>
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<td>Dr. Joan Morrissey</td>
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<td>$25,000</td>
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<td>$21,945</td>
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<td>$12,000</td>
<td>Dr. Walid Saba</td>
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<td>$15,604</td>
<td>Dr. Randa El-Marakby</td>
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<td>Dr. Angela Sodan</td>
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<td>Dr. Scott Goodwin</td>
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<td>Dr. Indra Tjandra</td>
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#### GSC 331 – Computing and Information Systems B

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<td>Dr. A. Mukhopadyhay</td>
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<td>Dr. Xiaobu Yuan</td>
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#### GSC 334 – Communications, Computers and Components Engineering

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#### GSC 336 – Pure and Applied Mathematics A

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<td>Dr. Frank Lemire</td>
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<tr>
<td>$11,550</td>
<td>Dr. Zhiguo Hu</td>
<td>$7,550</td>
<td>Dr. Frank Lemire</td>
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<tr>
<td>$9,002</td>
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<td>Electroporation System</td>
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<tr>
<td>$28,322</td>
<td>Dr. D. Fowle</td>
<td>An automated titration system</td>
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<tr>
<td>$9,545</td>
<td>Dr. L. Lee</td>
<td>Replacement of high performance liquid chromatographic system with Sirinart Ananvoranich and Siyaram Pandey</td>
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<tr>
<td>$45,000</td>
<td>Dr. R. Letcher</td>
<td>Gas Chromatography electron capture and flame ionization detection for research on environmental organic contaminant and metabolite research with with Brian Fryer, Douglas Haffner, Daniel Heath, Hugh MacIsaac, and David Fowle</td>
</tr>
<tr>
<td>$14,191</td>
<td>Dr. R. Letcher</td>
<td>Rotary evaporation system for Environmental organic contaminant and metabolite research with Brian Fryer, Douglas Haffner, Daniel Heath, Hugh MacIsaac, and David Fowle</td>
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</table>
### NSERC Research Grants

<table>
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<tr>
<th>Amount</th>
<th>Name</th>
<th>Department</th>
<th>Description</th>
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<tr>
<td>$11,063</td>
<td>Dr. J. Lovett-Doust</td>
<td>Biological Sciences</td>
<td>GPS/GIS Field Management system for integrated landscape and population ecology studies with Lesley Lovett-Doust.</td>
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<td>$27,885</td>
<td>Dr. H. MacIsaac</td>
<td>Biological Sciences/GLIER</td>
<td>Vehicles for field research with Brian Fryer, Douglas Haffner, Jan Ciborowski, Lynda Corkum, Peter Sale, Daniel Heath, Robert Letcher, and David Fowle,</td>
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<td>$10,000</td>
<td>Dr. B. Mutus</td>
<td>Chemistry and Biochemistry</td>
<td>Water Purification System with Keith Taylor, Ricardo Aroca, Lana Lee, Sirinart Ananvoranich, and Siyaram Pandey</td>
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<tr>
<td>$149,760</td>
<td>Dr. R. Schurko</td>
<td>Chemistry and Biochemistry</td>
<td>Solid-State NMR upgrade to existing 500 MHZ facility</td>
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<td>$36,406</td>
<td>Dr. K. Taylor</td>
<td>Chemistry and Biochemistry</td>
<td>Liquid chromatography equipment for development of wastewater treatment systems with Jatinder Kumar Bewtra, Biswas, and Nihar Stanley Reitsma</td>
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<tr>
<td>$63,538</td>
<td>Dr. B. Zielinski</td>
<td>Biological Sciences</td>
<td>Care of experimental aquatic animals with Jerome Cohen, Lesley Lovett-Doust, Jan Ciborowski, Lynda Corkum, and Michael Crawford</td>
</tr>
</tbody>
</table>

### SSHRC Grants

The Social Sciences and Humanities Research Council of Canada is the federal funding agency for university-based research and graduate training in the social sciences and humanities. As a key national research funding agency, SSHRC helps to continually build the human knowledge and skills Canada needs to improve the quality of its social, economic and cultural life. The following faculty are SSHRC grant recipients for the period April 1, 1999 to March 31, 2002:

- Dr. Ramazan Gencay  Economics  $63,500
- Dr. Sang-Chul Suh   Economics  $37,500

### Other External Sources of Funding

**Other Provincial and Government Grants**

The Ministry of Energy, Science and Technology (MEST) selected the Weconnect Infrastructure Project Plan as a successful proponent under the Connect Ontario/GeoSmart initiatives. The project received $1 million dollars from Connect Ontario and $500,000 from GeoSmart. Weconnect is a key element in the development of the Windsor-Essex Geomatics Cooperative (WEGC) envisioned in the Department of Earth Sciences 5-year planning document.
**Other External Sources of Funding**

Dr. A. K. Aggarwal, School of Computer Science, received $15,500 from C3 Tasp Pioneer Project for a project entitled *Network Aware Distributed Environment Toolkits*.

Dr. Dan Heath, Department of Biological Sciences and GLIER, was awarded:
- $26,500.00 from B.C. Fisheries for a *Trout Study*
- $7,990 from the University of Northern British Columbia for a project entitled *DNA Testing* of *Early and Late Run Sockeye in the Klukshu River*
- $15,000 from the Ministry of Fisheries and Oceans for *Critical Habitat and Genetic Analysis of Early and Late Run Sockeye in the Klukshu River*
- $4,000 from the Mountain Equipment Co-op for his *Yukon Salmon: Conserving a Dwindling Resource* project

Dr. Lesley Lovett-Doust, Department of Biological Sciences received $38,000 from Parks Canada for *Population Biology of Prickly Pear at Point Peleé National Park: genetic diversity and seedling survivorship in contrasting habitats*.

Dr. Angela Sodan, School of Computer Science, obtained $9,000 in funding from the C3 Pioneer Project Agreement for her *Asynchronous Meta Computing* project.

**International Research Grants**

Dr. David Antonelli, Department of Chemistry and Biochemistry received funding in the amount of $60,000 (US) for two years from the Petroleum Research Foundation.

Dr. Jan Ciborowski, Department of Biological Sciences and member of GLIER, was awarded a sub-contract with the University of Wisconsin-Green Bay and the Environmental Protection Agency for $160,000 (US) to coordinate the collecting and analyzing of samples of invertebrates in Lakes Ontario, Erie, Michigan and southern Huron. Dr. Ciborowski is a leading researcher in aquatic invertebrates in the Great Lakes and a recognized expert in the field.

Drs. Lynda Corkum and Barbara Zielinski were awarded $68,250 US from the Michigan Great Lakes Protection Fund for the project: "The Identification of Reproduction Pheromones used by the Round Goby in Michigan Waters where the Survival of Indigenous Fishes is Threatened."

Dr. Douglas Haffner, Department of Biological Sciences and GLIER, received $3,780.00 from the U.S. Geological Survey for the project *Organochlorines Pesticide Analysis*.

Dr. Roman Maev, Department of Physics received $112,500 in funding from Mercedes Benz AG for a project entitled *Ultra Sonic Imaging of Adhesive Joints*.

Dr. Hugh Maclsaac, Department of Biological Sciences and member of GLIER, was recently awarded a contract with the University of Michigan and Great Lakes Protection Fund for $250,000 (US) for his research project *Assessment of Transoceanic NOBOB Vessels and Low-Salinity Ballast Water as Vectors*. The program will allow him to collect data to indicate the vulnerability of the Great Lakes and will identify and establish the effect these species have on the Great Lakes. Dr. Maclsaac was awarded this contract on the basis of his reputation as an internationally renowned expert on species invasions in Ontario lakes.

Drs. Stan Reitsma and Doug Haffner, Department of Biological Sciences and GLIER, were awarded funding in the amount of $100,000 from the Great Lakes Sustainability Fund for their project *Detroit River Data & Modeling 2001-2002*.

Dr. Peter Sale, Department of Biological Sciences and GLIER, received a grant of $6,900 from the Ohio Department of Natural Resources for his project *Archived Perch*. 
One measure of the research strength of a Faculty is its catalogue of refereed journal articles. The following is a portion of that list, restricted to articles both published in 2000-2001 and submitted for inclusion in this report by one of the authors. Over 225 articles are included in the list. The ‘bolded’ author indicates a faculty member.

**Department of Biological Sciences**


Chang, W., Koshrowshahian F., Chang, R., **Crawford, M.** “xPitx1 plays a role in specifying cement gland and head during early *Xenopus* development.” *Genesis* 29(2): 78-90. 2001.


Department of Chemistry and Biochemistry


Guo, R.; Green, J. R. “Selective Nicholas Reactions of 1,4-Diyne Tetracobalt Complexes”, Synlett, 746-748. 2000.


Papers in Refereed Journals


School of Computer Science


**Department of Earth Sciences**


Symons, D.T.A., Williams, P.R., McCausland, P.J.A., Harris, M.J., Hart, C.J.R., and Blackburn W.H., “Paleomagnetism and geobarometry of the Big Creek batholith suggests that the Yukon-Tanana terrane has been a parautochthon since Early Jurassic.” Tectonophysics, 326: 57-72. 2000.


Department of Economics


Department of Mathematics and Statistics


J. Koperski and M. Czajkowski, “Improved spectroscopic characterization of the ground X0\(^+\) (\(^{1}\text{E}^+\)) and lowest excited A0\(^+\) (\(^{3}\text{A}^+\)), B1 (\(^{3}\text{E}^+\)) and D1 (\(^{1}\text{A}^+\)) energy states of CdNe complex in a wide range of internuclear separations”. *The European Physical Journal D*, 10, 363. 2000.

J. Koperski, Sz.M.Kielbasa, M. Czajkowski., “Interatomic potentials of cadmium-argon B1 (\(^{3}\text{E}^+\)) and X0\(^+\) (\(^{1}\text{E}^+\)) states based on near-dissociation expansion and “hot” bands observed in the B1 \(\dot{\text{O}}\) X0\(^+\) excitation spectrum.” *Spectrochimica Acta Part A*, 56, 1613. 2000.


Papers in Refereed Journals


The Faculty of Science is committed to teaching and readily accepts its responsibility to provide quality instruction to its students for the benefit of both Ontario and Canada. In recognition of this responsibility, the Faculty published its first “Instructor’s Handbook” in September, 2001 and was pro-active in seeking recognition and awards for some of its excellent professors. The Faculty is also indebted to the many qualified sessional instructors, listed at the end of this section, without whom the number of courses offered in 2000-2001 would have been dramatically reduced.

**Alumni Teaching Award**

In recognition of their outstanding teaching abilities, passion and dedication, Dr. Daniel Britten, Department of Mathematics and Dr. Jon Lovett-Doust, Department of Biological Sciences were honoured at the June 2001 convocation ceremonies as recipients of the Alumni Award for Distinguished Contributions to University Teaching. Students, former students, and colleagues agree that the commitment of these professors to quality instruction is unparalleled.

“Dr. Britten has a way of connecting with his students, and his creative teaching methods make his courses fun and understandable. He willingly provides extra assistance to those who need it, and assists students with learning about career opportunities. Dr. Britten is one of the best teachers I ever had. His enthusiasm is infectious and his encouragement to students unending.” (Former student)

"Teaching is obviously a very big part of one's life as a professor --- whether it involves the array of undergraduates who take courses or the graduate students and undergraduates who carry out research in the lab. In general, I try hard to ensure that context is emphasized rather than content. Furthermore it seems to me that teaching is equal parts theatre and content. So it can be nerve-racking, but it's also great fun, exhilarating and rewarding." (Dr. Lovett Doust)

Professors from the Faculty of Science recognized and honoured for their distinguished teaching career in previous years are:
Alumni Teaching Award

Year  Professor/Department
1987  Dr. A. Cormac Smith, Department of Mathematics and Statistics
1988  Dr. Roger J. Thibert, Department of Chemistry and Biochemistry
1989  Prof. Peter Burrell, Department of Economics
1990  Dr. John McIntosh, Department of Chemistry and Biochemistry
       Dr. J. E. Habowski, Department of Biology
1991  Dr. Nigel Hedgecock, Department of Physics
1993  Dr. Frank Lemire, Department of Mathematics & Statistics
1996  Dr. Om P. Chandna, Department of Mathematics & Statistics
1997  Dr. Mervyn Franklin, Department of Biological Sciences

UWSA Teacher of the Year

Every year, a committee of the University of Windsor Students’ Alliance considers nominees from students for their Teacher of the Year award. The criteria for selection are:
- approachability
- concentration on teaching
- commitment to the development of teaching skills in other colleagues
- willingness to go above and beyond for students
- defending students’ interests
- helping students in pursuit of higher learning.

The recipient of the award for 2001 was Dr. William McConkey, Department of Physics. Other finalists from the Faculty were: Dr. Dan Britten, Department of Mathematics and Statistics and Dr. Richard Frost, School of Computer Science.

Other Awards and Acknowledgements

Earth Sciences Professor Dr. Frank Simpson received an Award for Outstanding Faculty Contribution to Co-operative Education for his efforts in arranging a student placement with a development project in India.

Highest Weighted Mean Teaching Scores

Starting in Fall 2000, the Faculty of Science has recognized a single faculty member from each department for their contribution to teaching. The members listed below taught over 100 students and had the highest weighted mean teaching score over all courses taught in both the Fall 2000 and Winter 2001 terms. Congratulations.
<table>
<thead>
<tr>
<th>Department of Biological Sciences:</th>
<th>Dr. Hugh Fackrell</th>
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<tr>
<td>Department of Economics:</td>
<td>Dr. Ron Meng</td>
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<td>Dr. Frank Lemire</td>
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<td>School of Computer Science:</td>
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<td>School of Physical Sciences</td>
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<td>Chemistry and Biochemistry</td>
<td>Dr. Jim Green</td>
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<td>Earth Sciences</td>
<td>Dr. Alan Trenhaile</td>
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<tr>
<td>Physics</td>
<td>Not provided</td>
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</table>

**Sessional Instructors**

The Faculty is indebted to the following Sessional Instructors whose service and expertise were invaluable to the programs offered by the various departments.

**Biological Sciences**
- Dr. Mervyn Franklin
- Dr. Derek Jane
- Dr. Julie Smit
- Dr. Maxine Holder-Franklin
- Mrs. Maria Sawicki

**Chemistry and Biochemistry**
- Mrs. Shirin Akhter
- Dr. Joseph Macri
- Mr. Paul Root
- Amit Anand
- Dr. John McIntosh
- Mike Siwek

**Computer Science**
- Mr. Maunzer Batal
- Mr. Khaled Ben-Lamine
- Ms. Dalia S. Pouli
- Mr. Kashif Bhutta
- Mr. Ziad Kobt
- Mr. Paul Preney
- Dr. Pierre Boulos
- Mrs. Helen Kudr
- Mr. Rayan Raghuram
- Mr. Jeffrey Duell
- Mr. Zhiyong Liu
- Mr. Prataparedoy Sathi
- Ms. Evia El-Habash
- Dr. Neeta Majmudar
- Mr. Naveen Shakelli
- Mr. Randy Fortier
- Mr. David Mayo
- Mr. Douglas Thistle
- Mr. Paul Fraser
- Mr. Terrence Mckay
- Mr. John H. Smith
- Mr. Adlane Habed
- Mr. Walid Mnaymneh
- Ms. Kristina Verner
- Ms. Hongxuan Jin
- Mr. Rabih Neouchi
- Mr. Thomas Williams
- Mr. Fred Katzman
- Mr. Linganagouda (Raj) Patil
- Mr. Shaochun Xu

**Earth Sciences**
- Ms. Sherry Barry
- Dr. John Guiry
- Dr. Todd Sands
- Ms. Bernadette Bruette
- Dr. Michael Harris
- Dr. Terry Smith
- Dr. Maria Cioppa
- Dr. Peter Hudec

**Department of Mathematics and Statistics**
- Mr. John Battaglia
- Ms. Jennifer Johrendt
- Dr. Maria Pap
- Dr. Krishan Duggal
- Mr. Pierre Jraiche
- Mrs. Sneh Rana
- Dr. John Guiry
- Mr. Sharif Musameh
- Dr. Manindra Roy

**Physics**
- Dr. Alexei Frolov
- Dr. Wladyslaw Kedzierski
- Dr. Gregory Trayling
- Dr. John Guiry
- Dr. Luke Mcaven