

**SIMON FRASER UNIVERSITY**

**FACULTY OF SCIENCE**

**ANNUAL REPORT NO. 17**

**1997-98**

**Simon Fraser University  
8888 University Drive  
Burnaby, BC V5A 1S6  
[www.sfu.ca/~science/](http://www.sfu.ca/~science/)**

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**BIOLOGICAL SCIENCES**

**Tenured or Tenure-Track  
Faculty**

**PROFESSORS**

	Albright, L.J.	Marine Microbiology
	*Baillie, D.L.	Genetics
	Beckenbach, A.T.	Molecular Evolution
<i>NSERC Industrial Research Chair</i>	Borden, J.H.	Forest Entomology
<i>Director, IMBB</i>	*Brandhorst, B.P.	Developmental & Molecular Biology
<i>NSERC/CWS Research Chair</i>	Cooke, F.	Population Ecology of Birds
	Dill, L.M.	Behavioural Ecology
	Druehl, L.D.	Marine Phycology
	Farrell, A.P.	Cardiovascular Physiology,
		Aquatic Toxicology
	Law, F.P.C.	Environmental Toxicology
	Mackauer, M.	Insect Parasitology, Biological
		Control, Biosystematics
	Mathewes, R.W.	Paleoecology, Palynology
	McKeown, B.A.	Endocrinology
	Punja, Z.K.	Plant Pathology, Disease Resistance
		Biotechnology
	Rahe, J.E.	Plant Pathology, Biochemistry
	Roitberg, B.D.	Population Dynamics, Insect
		Behavioural Ecology
<i>Departmental Chair</i>	Smith, M.J.	Molecular Evolution & Development
	Srivastava, L.M.	Plant Physiology, Cell Biology
	Verbeek, N.A.M.	Ornithology, Field Ecology
	Webster, J.M.	Nematology, Parasitology
	Winston, M.L.	Insect Behavioural Ecology
	Ydenberg, R.C.	Behavioural Ecology

**ASSOCIATE PROFESSORS**

	Breden, F.	Behavioural and Population Ecology
	Brooke, R.C.	Plant Ecology, Ecophysiology
	Burr, A.H.	Biophysics, Photobiology,
		Neuroethology, Molecular Biology
	Crespi, B.J.	Behavioural Ecology
	Delaney, K.R.	Neurophysiology
	Fankboner, P.V.	Marine Invertebrate Biology
	Gries, G.J.	Insect Chemical Ecology
	Harestad, A.S.	Ecology and Behaviour of Mammals
	Hartwick, E.B.	Marine Ecology & Fisheries
<i>Associate Chair</i>	Hauerland, N.H.	Insect Biochemistry and Physiology
	*Honda, B.M.	Molecular & Developmental Biology,
		Biochemistry
	Lister, G.R.	Eco-Physiology of Forest Trees
	Moore, M.M.	Toxicology, Microbiology
	Nicholson, R.A.	Biochemical Toxicology
	Williams, T.	Physiology Ecology

**ASSISTANT PROFESSORS**

<i>Jt. Appointment with Geography</i>	Kennedy, C.J.	Aquatic Toxicology
	Kermode, A.R.	Plant Molecular Biology
	Lee, S.P.	Plant Physiology
	Lesack, L.	Limnology, Biogeochemistry
	*Scott, J.K.	Biochemistry
	Plant, A.L.	Plant Molecular Biology
	*Price, J.V.	Developmental Genetics
	Verheyen, E.	Genetics

**PROFESSORS EMERITI**

Beirne, B. (*Deceased February 1998*)  
Finlayson, T.  
Fisher, F.J.  
Vidaver, W.E.

**LABORATORY INSTRUCTORS**

Fernando, M.  
McGregor, N.  
McMullan, T.  
Sharp, J.  
Thong, C.  
Wilson, D.

**LIMITED TERM FACULTY**

Bendell-Young, L.  
Cooch, E.  
Lank, D.

**ADJUNCT PROFESSORS**

Anderson, G.	Kabata, B.
Angerilli, N.	Käfer, E.
Belton, P.	Klein, K.K.
Binder, W.D.	Lalonde, R.G.
Butler, R.	Lipovsky, V.P.
Ching, H.L.	MacCarthy, H.R.
Devlin, R.H.	Margolis, L.
Eastwell, K.C.	Martin, K.
Evelyn, T.	Utkhede, R.S.
Friend, T.P.T.	Vernon, R.
Graham, M.S..	Vrain, T.
Judd, G.J.R.	Walker, I.

\*Joint Appointments with Biochemistry as the home unit.

**SUPPORT STAFF**

*Administrative and  
Professional Staff*

Conlin, C.  
Medford, B.

Departmental Assistant  
Laboratory Coordinator

*Secretarial Staff*

Bhakthan, M  
Day, A.  
Foran, S.  
Fox, B.  
Nguyen, M.  
Oliver, S.  
Rapchuk, F.

*Technical Staff*

Bourne, V.  
Halford, S.A.  
Hope, S.A.  
Leighton, B.  
Leonard, C.  
Murrell, G.M  
Siekkinen, M.L.  
Syed, A.  
Yang, M.



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Suda, N.

*Technical Staff*

Lum, Y.N.G.

**CHEMISTRY**

**Tenured or Tenure-Track  
Faculty**

*Dean of Science  
Departmental Chair*

*University Professor*

**PROFESSORS**

*Cushley, R.J.	Physical Biochemistry
D'Auria, J.M.	Nuclear Chemistry
Einstein, F.W.B.	Inorganic Chemistry
Gay, I.D.	Physical Chemistry
Jones, C.H.W.	Radiochemistry
Korteling, R.G.	Nuclear Chemistry
Malli, G.L.	Theoretical Chemistry and Chemical
	Physics
Percival, P.W.	Muon Spin Resonance
Pinto, B.M.	Physical & Bio-organic Chemistry
Pomeroy, R.K.	Organometallic Chemistry
*Richards, W.R.	Biochemistry
Slessor, K.N.	Bio-organic Chemistry
Sutton, D.	Inorganic & Organometallic Chemistry
Wolfe, S.	Organic Chemistry

**ASSOCIATE PROFESSORS**

Bennet, A.J.	Organic & Bio-organic Reaction Mechanisms
*Borgford, T.J.	Biochemistry
*Cornell, R.B.	Biochemistry
Hill, R.H.	Photochemistry
Holdcroft, S.	Polymer Chemistry
Kiehlmann, E.	Organic Chemistry
Lower, S.K.	Physical Chemistry
Peterson, L.K.	Inorganic Chemistry
*Sen, D.	Biochemistry
Wells, E.J.	Magnetic Resonance

**ASSISTANT PROFESSORS**

Agnes, G.R.	Analytical Chemistry
Leach, G.W.	Physical Chemistry
Ye, Z.G.	

**PROFESSORS EMERITI**

Aronoff, S.  
Chow, Y.L.  
Funt, B.L.  
Voigt, E.-M.

**FACULTY RETIREMENTS**

Bell, T.  
Oehlschlager, C.  
Walkley, J.



**LABORATORY INSTRUCTORS**

Black, S.  
Brodovitch, J.C.  
Hanlan, A.J.L.  
Palmer, E.T.

**ADJUNCT PROFESSORS**

Berry, J.  
Prater, K.  
Ruth, T.  
Tracey, A.  
Weinberg, N.

**SUPPORT STAFF**

*Administrative and  
Professional Staff*

Chin, F.  
MacFarlane, K.  
Nelson, V.A.  
Tracey, A.S.

Systems Consultant  
Laboratory Coordinator  
Departmental Assistant  
Supervisor NMR Services

*Secretarial Staff*

Brion, E.M.  
Koo, D.M.

*Technical Staff*

Vaisanen, T.  
Cheah, E.P.T.  
Derton, E.  
Owen, G.L.  
Saunders, P.R.C.  
Schmidt, D.J.  
Tracey, M.M.  
Zhang, P.  
Zhang, S.

\*Joint Appointments with Biochemistry as the home unit.

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**MATHEMATICS AND STATISTICS**

**Tenured or Tenure-Track  
Faculty**

*Department Chair  
Shrum Professor*

**PROFESSORS**

Alspach, B. Graph Theory, Discrete Mathematics  
Berggren, J.L. History of Mathematics  
Borwein, J.M. Mathematical Analysis & Computation  
Optimization

Borwein, P.B. Analysis and Number Theory  
Brown, T.C. Algebra, Combinatorics  
Das, A. Relativity & Quantum Mechanics  
Graham, G.A.C. Applied Math  
Heinrich, K. Combinatorics

*Assistant to V.P.Academic  
(Academic Planning)  
Jt. with Computing Science*

Hell, P. Computational Discrete Mathematics  
Lachlan, A.H. Mathematical Logic  
Lockhart, R.A. Statistics  
Reilly, N.R. Algebra  
Routledge, R.D. Statistics, Population Biology  
Russell, R.D. Numerical Analysis  
Shen, C.Y. Applied Analysis  
Thomason, S.K. Mathematical Logic  
Thomson, B.S. Analysis

**ASSOCIATE PROFESSORS**

Dean, C.B. Mixture Models  
Eaves, D.M. Statistical Inference  
Goddyn, L.A. Graph Theory  
Gerber, H. Mathematical Logic  
Pechlaner, E. Relativity  
Schwarz, C.J. Statistical Ecology  
Sitter, R.R. Statistics  
Swartz, T.B. Statistics  
Tang, T. Applied Math  
Trummer, M.R. Numerical Analysis  
Weldon, K.L. Statistics

**ASSISTANT PROFESSORS**

Choksi, R.  
Kropinski, M.-C. Applied Mathematics  
Monagan, M. Computational Algebra  
Promislow, K. Applied Mathematics, Numerical  
Analysis

**FACULTY RETIREMENTS**

Freedman, A.R.  
Ryeburn, D.

**FACULTY RESIGNATIONS**

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Parker, G.

**PROFESSORS EMERITI**

Bojadziev, G.N.  
Harrop, R.  
Lardner, R.  
Shoemaker, E.M.  
Singh, M.  
Stephens, M.A.  
Villegas, C.

**LABORATORY INSTRUCTORS**

Arya, J.C.  
Berggren, T.M.  
Chen, X.  
Dubiel, M.M.  
Hebron, J.S.

**ADJUNCT PROFESSORS**

Brewster, R.  
Hare, D.  
Rosenfeld, M.  
Vanderwerff, J.D.  
Van Vleck, E.  
Yu, M.L.  
Yu, Q.

**SUPPORT STAFF**

*Administrative and  
Professional Staff*

Ian Bercovitz  
Fankboner, M.  
Jorgenson, L.

Statistical Consulting Service  
Departmental Assistant  
Systems Administrator

*Secretarial Staff*

Currie, J.A.  
Fabricius, J.  
Holmes, S.  
Pogue, D.Y.

**PHYSICS**

**Tenured or Tenure-Track  
Faculty**

	<b>PROFESSORS</b>	
	Ballentine, L.E.	Liquid Metals, Foundations of Quantum Mechanics Condensed Matter Theory
	Clayman, B.P.	Far-infrared Properties of Solids
	Colbow, K.	Optical Properties, Biological Membranes, Photosynthesis Condensed Matter, Structure and Electronic Properties, EXAFS
	Crozier, E.D.	
	Curzon, A.E.	Electron Microscopy, Thin Films, Particles, Lubrication
	Enns, R.H.	Nonlinear Problems in Optics & Biophysics
<i>Departmental Chair</i>	Frindt, R.F.	Layered Solids, Electrical Studies, Intercalation Solids
	Heinrich, B.	Molecular Beam Epitaxy, Magnetism, High Tc, Superconducting Ceramics
	Huntley, D.J.	Archaeometry, Thermoluminescence Dating
	Irwin, J.C.	Optical Properties of Solids
	Kirczenow, G.	Condensed Matter Physics
<i>NSERC Industrial Research Chair</i>	Plischke, M.	Critical Phenomena, Solid State Theory
	Thewalt, M.L.W.	Semiconductor Physics
	Viswanathan, K.S.	Gauge Theories of Strong Interactions and Statistical Mechanics
<i>Shrum Professor (1987-1992)</i>	Wortis, M.	Solid State Theory, Statistical Mechanics, Surface Physics

**ASSOCIATE PROFESSORS**

	Bechhoefer, J.	Liquid Crystal Systems
	Palmer, L.H.	Celestial Mechanics, Musical Acoustics
Watkins, S.P.		Condensed Matter Physics

**ASSISTANT PROFESSORS**

<i>Jt. with Engineering Science</i>	Bolognesi, C.R.	High Speed Semiconductor Devices
	Frissen, B.J.	Soft Condensed Matter
<i>Jt. with Biochemistry</i>	*Thewalt, J.L.	Physical Properties of Membranes, Solid State Deuterium NMR
	Trottier, H.D.	Theoretical High Energy Physics

**PROFESSORS EMERITI**

Arrott, A.  
Cochran, J.F.  
Gygax, S.  
Morrison, S.R.  
Rieckhoff, K.E.

\*Joint Appointment with Biochemistry as the home unit.

**ADJUNCT PROFESSORS**

Jennings, B.K.  
Vetterli, M.

Woloshyn, R.M.

**LABORATORY INSTRUCTORS**

Alberding, N.

Einstein, J.M.

**IN MEMORIAM**

Häusser, O. (March 4, 1998)

**SUPPORT STAFF**

*Administrative and  
Professional Staff*

Rangnekar, S.

Departmental Assistant

*Secretarial Staff*

Beever, S.A.

Reid, A.E.\*

Roy, S.\*

Smith Simpson, S.L.

*Technical Staff*

Billany, M.

Myrtle, K.D.

Rastan, M.

Rudd, J.M.

Wilson, S.M.

\*For part of reporting period only.

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**EARTH SCIENCES**

**Tenured or Tenure-Track  
Faculty**

<i>Jt. with Geography</i>	<b>PROFESSORS</b> Hickin, E.J.	Fluvial Geomorphology and Sedimentology
<i>Jt. with Geography</i> <i>Director</i>	Roberts, M.C.	Geomorphology, Modern Deltaic Environments

**ASSISTANT PROFESSORS**

Allen, D.	Hydrogeological Investigations, Resource Evaluation and Computer Modelling
MacEachern, J.A.	Ichnology, Sedimentology, Stratigraphy of Clastic Rocks
Mustard, P.S.	Cordilleran Sedimentary Basins
Thorkelson, D.J.	Cordilleran Tectonics
Ward, B.	Forestry Geoscience, Terrain Mapping, Drift Prospecting, Quaternary Geology

**LABORATORY INSTRUCTORS**

Dunlop, R.

**ADJUNCT PROFESSORS**

Clague, J.  
Monger, J.W.  
Moore, J.M.

**SUPPORT STAFF**

*Administrative and  
Professional Staff*

Alexander, C.M.                      Administrative Assistant

**DEAN'S OFFICE**

<i>Administrative and Professional Staff</i>	Jones, C.H.W. Hotell, R. Simms, J. Gregory, P.	Dean Faculty Assistant Director, Science Student Liaison Assistant to Dean
<i>Secretarial Staff</i>	Dadswell, D. Norman, L.	
	<b>Retirements</b> Stuart, K.	

**SCIENCE TECHNICAL STAFF**

<i>Science Stores</i>	Lakhan, R. Lee, J. McAdie, R.J. Todd, V.A.	
<i>Science Technical Centre</i>	<b>Machine Shop</b> Meyer, J. Shoults, J.C. Van Der Wal, H. Zubic, R.	
	<b>Electronics Shop</b> Eckert, K.P. Holland, R.G. Kozlow, H. Van Der Est, J.H.	
	<b>Glassblowing Shop</b> Rynders, G.J. Wakida, L.O.	
	<b>Retirements</b> Bhan, C. Szolnoki, A.	



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**FACULTY OF SCIENCE - ADMINISTRATIVE POSITIONS**

**Chairs**

Smith, M.J.	Biological Sciences
Korteling, R.G.	Chemistry
Berggren, J.L.	Mathematics and Statistics
Frindt, R.F.	Physics

**Associate Chairs**

Hauerland, N.	Biological Sciences
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**Directors**

Brandhorst, B.P.	Institute of Molecular Biology and Biochemistry
Roberts, M.C.	Earth Sciences
Punja, Z.K.	Centre for Pest Management
Harestad, A.S.	Animal Care Facility
Wells, E.J.	Science Program Liaison, University College of the Fraser Valley

These appointments are made under Policy A13.01 to 13.04.

## **NEW PROGRAM INITIATIVES**

### **Introduction of a Molecular Biology Stream in the Biochemistry Undergraduate Program**

This is the final step in the integration of these two subjects at the undergraduate and graduate level and the establishment of a new Department of Molecular Biology and Biochemistry. This will better serve students in this forefront area of science.

### **Establishment of a Centre for Environmental Biology**

This Centre will replace the existing Centre for Pest Management. The new Centre will administer both the Masters in Pest Management and the newly approved Masters in Environmental Toxicology. Not only will this streamline the administration of these two professional masters programs but it will also help integrate these two areas in the study of the ecological and sustainability management of the terrestrial and aquatic environments.

### **Proposal for a Major and Honours Program in Actuarial Science**

Currently there is a Certificate Program in Actuarial Science. The mounting of a major and honours degree will give Actuarial Science much high profile both amongst students and outside the University. This proposal will be submitted to DPRC for review.

**ENROLMENT STATISTICS**

**UNDERGRADUATE (FTE'S)**

	<b>96/97</b>	<b>97/98</b>
Biochemistry	131.0	128.2
Biological Sciences	541.9	538.8
Chemistry	436.5	468.6
Earth Sciences	48.0	51.9
Environmental Sciences	3.3	7.3
Math and Statistics	787.8	851.9
Physics	248.7	275.2
Science	<u>4.3</u>	<u>5.2</u>
<b>Total</b>	<b>2,201.5</b>	<b>2,327.1</b>

**GRADUATE (FTE's)**

<b>Department/Program</b>	<b>96/97</b>	<b>97/98</b>
Biological Sciences	145.8	148.8
Aquaculture	5.0	1.7
Pest Management	30.0	25.8
Chemistry	62.7	59.3
Earth Sciences	0.7	3.7
Geography	9.0	11.0
Math & Statistics	53.7	52.3
Physics	49.0	46.6
Special Arrangement	-	0.7
Exchange	-	<u>0.1</u>
<b>Total</b>	<b><u>355.8</u></b>	<b><u>349.9</u></b>

## GRADUATION STATISTICS

### B.SC. GRADUATES

Applied Mathematics	6
Applied Physics	5
Archaeology	1
Biochemistry	32
Biosciences	152
Chemistry	19
Computing	1
Earth Sciences	1
Environmental Science	3
Geography	26
Mathematical Physics	3
Mathematics & Statistics	23
Management & Systems Science	9
Physics	15
Other (Double minors)	5
	<u>301</u>

### LISTING OF B.Sc. GRADUATES - FALL 1997

Adachi, Sachiyo Betty	*Kinnee, Karen Judith
Anhaouy, Pichmony	Kowalewich, Elena Joan
Astbury, Alison Marie	Krocker, Nikkie Rae
Balcar, Jan	Loss, Cornelia
Burnes, Shelley Rose	Maniwa, Andy
Chan, Ka Yi	McCredie-Hauser, Kristen Louise
Chan, Stephen C.	McGucken, Jennifer Leigh
Chand, Suman	McKenzie, Timothy Peter
Chang, Su-Ming Paul	McKinnon, Margaret Leslie
Chapman, Billie	Mikolajczyk-Guest, Tasha Lee
Chen, Conrad	Mills, Christopher Ryan★
Cheung, Rebecca Wai Yee	Moslehi, Arash
Coad, Bryan Robert	Pacey, Charles Benjamin
Cowen, Laura Louise Elizabeth	Parker, Monica Lyn
Fennell, Michelle	Rahemtulla, Shalina Bahadur
Fox, Joanne Alison	Shiu, David
Gibson, Brian Stephen	Story, Tracy Lynn
Gill, Jasjit Singh	Sun, Andrew (Chi-Fa)
Goto, Susan Lisa	Susanto, Jocelyn Fortuna
Graham, Trina Michelle	Tanlimco, Jerry
Hamming, Kevin Scott Christopher	Taylor, Jennifer Christie
Henderson, Krista Colleen	Tong, Vincent Wai Yip
Hidalgo, Edith Jane	Tran, Joh
Ho, Sai Yin Alan	Voo, Larksun
Humphries, Andrew Charles	Wang, Jennie Chen-Yi
James, Wendy Lynne	Watanabe, Shingo
Janmohamed, Anisa	Wilson, Michelle Christy

\* First Class Honours

\*\* Honours

★ Dean's Undergraduate Convocation Medal Winner (awarded at Spring 98 Convocation)

**LISTING OF B.Sc. GRADUATES - SPRING 1998**

Abley, Michael Shawn  
Acosta, Maria Rhodora  
\*Aghababaie, Yashar  
\*Aiken, Jonathan Jay  
Anderson, Katherine Evelyn  
Anderson, MariAnne  
Andrews, Bryan  
Asgeirsson, David John  
Asselstine, Lorrie Ann  
Au, Grace Wing Sze  
Baerg, Myron Lee Digger  
Bak, Jason Michael  
Ballentine, Jennifer Noreen  
Bateman, Christopher  
\*Bates, Amanda Elizabeth  
Beaulne, Myriam Laura  
Begg, Jennifer Lynne  
Bhullar, Mandeep David  
Bianchin, Mario S.  
Birnie, Robert William  
Black, Morgan Elizabeth  
Boyle, Jonathon Mark  
Bradley, Russell Weldon  
Brady, Gregory Kirk  
Brar, Parm  
Breitsprecher, Katrin  
Bridger, David William  
Brown, Marnie Nicole  
Burleigh, Jennifer Susan  
Butler, Angela Christine  
Cacik, Renata  
Cameron, Scott Brody  
Canal, John Paul  
Carter, Angela Jean  
Caunt, Robert Brian Richard  
Chan, Anna Yee Wan  
Chan, Douglas  
Chan, Ellen Shun Lai  
Chan, Rinco Wing Ho  
Charleton, Kristin  
Chen, David  
Chen, Heather F.Y.  
Cheng, Benjamin S.E.  
Cheng, Kenneth  
Cheung, Ivy Wai Mun  
Cheung, K. Johnson  
Chi, Ka Fai Kenneth  
Chia, Elizabeth Wan Yeang  
Chia, Rose Khee Yien  
Chiu, Doris Diane  
Chong, Franky Ping Kit  
Chong, Wai Shing Dick  
Chow, Kathy Ka Man  
Christian, Blain Douglas  
Chu, Kayla Pui Yin  
Chun, Alice Mi Hwa  
Chura, Ryan Trevor  
Ciofani, Travis Malcolm  
Coldham, Janice Carrie  
Costanzi, Nicola  
\*\*Coupe, Malcolm Douglas  
Coutts, Jon Douglas Ronald  
Cowie, Tara Shannon  
DeAngelis, Kelly Dawn  
DeFreitas, Bart Andre  
DePaoli, Maico Giovanni  
Deagle, Margaret Lynn  
Deans, Aaron Michael  
Deines, Susan Catherine  
Deol, Sunny Jagdeep Singh  
Devlin, Shawn  
Dhesi, Jasvinder Singh  
Dorrance, Elizabeth-Ann  
Drahovzal, David Milos  
Dunn, Christopher Ryan  
Enquist-Miranda, Luis Alexander  
\*\*Evans, R. James  
Fan, Sze-Wah, Dominic  
Ferguson, Analaise O.  
Fung, Janice Man Yin  
Fuscaldo, Marianna  
Ghanavizchian, Nasim  
Gilham, Dean  
Gill, Harpreet  
Girn, Noreendar Kaur  
Grant, Aaron Daniel  
Grant, Alana Jean  
\*Grant, Jason Robert  
Greene, Patrick Lloyd  
Hadimulya, Nicolette  
Halfnights, Steven Leslie  
Hall, Tara  
Hanlon, Kelly Louise  
Hansen, Cindy Diane  
Hardacker, Kimberley Ann  
Herr, Charnjit

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Hirji, Farah	Marzo, Bernadette Renee
Ho, Kim Shan	Mashologu, Thabang Teboho Bennie
Hodge, Alexander	Mason-Wood, Simon Michael
Hong, Johnny	McCague, Claire Margaret
Horlacher, Heidi Marie	McClinton, Anita Nicole
Horoupian, Natalie	McDonald, John Bruce James
Howard, Sara Grace	Mehrabian, Peter R.
Hurtado, Tracey Lynne	Merz, Laura Alexandra
Jacobsen, Jennifer Lynn	Metz, Melanie Melissa
Jang, Brian David	Miller, Candice Lee
Janse, Ronald Martin	Min, Anie
Javan-Sehati, Paymaneh	Mogge, Mitchell
Jeffrey, Krista Lynne	Montague, Jesse David
Jones, Michelle Angeline	Morem, Amanda Kathleen*
Katnick, Deanne Christina	Mullan, Jonathan
Khan, Zia Faranaz	Nakamura, Hisae
Klitz, David	Neagu, Mihail Gabriel*
Knutson, Stacy Theresa	Nelson, Shane Alan
Ko, Yancey Wai Yan	Nethery, Katherine Margaret
Ko, Young Wan Kevin	Ng, Nim Pong Michael**
Korteling, Brett	Ng, Kwan Eilan
Kruisselbrink, Bridget Joan	Nguyen, Anthony Huy
Krumpak, Jaka	Nielsen, Elizabeth Wendy
Kurrein, Lisa Marie*	Nijar, Gurbinder
Lai, June Wing Sze	Oddy, Claire Louise
Lau, Ka Wo Denny	Olsen, Heidi
Law, Jacques (Tak Hung)**	Osterdahl, Karl Fabian
Lee, Alice	Park, Steven Woo Il
Lee, Chun-Huei Helen	Parmar, Malin Pernilla
Lee, Darin Lindsay	Peeters, Allan Jozef
Lee, Desmond Ho Yin	Phillips, Jennifer Myfanwy
Lee, Wai Ching Cindy	Phung, Christine Mohn-Binh
Leong, Pearlynn Mei Yien	Porter, Aswea Dawn
Leroux, M. Scott	Ptachyk, Harold Dan
Leung, Chun Luk Calvin	Puchalski, Sarah Meiko
Leung, Nicholas Hin Chung	Purewal, Bulvinder
Lever, Melody Anne	Rattray, Peter James
Lewis, Sheryl Ann	Reilhan, Jody Paul*
Lilley, Lance Gordon**	Reiniger, Nina
Lin, Hsiu-Chen Ann	Remedios, Stephen Michael
Lince, Melissa Ann	Reynolds, Tracy Lee
Ling, Leevan*	Richardson, Dean Robert
Loveridge, Albert Ryan	Roberts, Mary G.
Lukach, Michael William	Rosborough, Michael Kevin
Ly, Paul The Luong	Ruff, Robin Rene
MacIntosh, John William	Runganaikaloo, Maya
Mah, Colin Nathan	Sabunciyani, Saro
Mandel, Tanya Kylie	Sadlish, Jennifer Marie
Mangat, Ramanjot Kaur	Sanny, Justina Siew Peng
Mann, Rashpal Singh	Sarahan, Cheryl R.
Marsden Rachel	Savege, Jill L.
Martin, Rene	

Sayde, Juliano John  
Scheurmeyer, Frank Xavier  
Scholz, Tanja Anita  
Schurch, Mark Ian  
Seely, Robyn Elizabeth  
Shabbits, Megan Leah\*  
Shaw, Kerra Lyn  
Sheldon, Stephen Paul  
Shin, Julie Insook  
Shore, Jennifer Lyn  
Shu, Fan-Ching  
Sikora, Paul Patrick George  
Simpson, Andrew Paul  
Siu, Fung  
Smith, Travis Mclain  
Steele, Christopher John\*  
Stefani, Lisa Marie  
Stefiuk, Lori Michelle  
Stowe, Jennifer Lynn  
Stuart, Jonathan Douglas  
Suen, Kevin Wing-Kwun  
Sze, Penny Ngar Yu  
Tam, Maggie  
Tan, Emilie

Thiess, Mary Eleanor  
Thompson, Amanda Sarah  
Tong, Amy Hin Yan  
Tordiffe, Andrea Lynne  
van Oort, Terrence  
Vanden Hoven, Bernard Gerardus  
Wacher, Abigail  
Walde, Kirsty Jean  
Wiener, Koruger Adcock  
White, Jason Tyler  
Whittington, Robin  
Williams, Derek John  
Williams, Jf\*\*  
Williams, Michael  
Wilson, Edward Russell  
Wilson, Gwendolyn Ruth  
Wingerter, Candice Danielle  
Wolford, Nathan John  
Wong, Edmund Yat Ming  
Wong, Katina Chi Kwan  
Wood, Ryan Daniel  
Yee, Regina Mary  
York, Tammie Lorraine  
Zainali, Leila

- \* First Class Honours
- \*\* Honours
- ★ Dean's Medal Winner

**M.Sc. and Ph.D. GRADUATES**

	M.Sc.	Ph.D.	Total
Biological Sciences	20	12	32
Master of Aquaculture	3		3
Master of Pest Management	9		9
Chemistry	11	11	22
Geography	2		2
Math & Statistics	7	5	12
Physics	3	5	8
Total	55	33	88

**LISTING OF M.SC AND PH.D GRADUATES FALL 1997**

**Degree of Doctor of Philosophy**

Amaar, Yousef Grera	*★Li, Yingfu
Blatt, Suzanne Elizabeth	McKay, Sheldon John
Bluskov, Iliya	Poland, Therese Marie
Butler, Kenneth Alex	Sandercock, Brett Kevin
Harris, Shannon Lea	Wang, Guangshun
Leiva-Paredes, Carmen Gioconda	

**Degree of Masters of Science**

Akuche, Christiana Ifeyinwa	Nagra, Harpreet K.
Baisley, Tammy Lynn	Nxumalo, Fikile
Campbell, Barbara Marie	Peter, Lui Wing Shing
Fairfield-Carter, Brian Patrick	Reed, Eric, T.
Feng, Ping	Robinson, Lesley Mary
Horvath, Christina Iren	Seubert, John Matthew
Kötschau, Immo Michael	van de Wetering, Debbie Evelyn
Lee, Wing Hong Edmond	Wardman, Chad William
Lemke, Malgorzata Anna	Wong, Erick Bryce
MacCharles, Andrea Marie	Zhong, Wenkai

**Degree of Master of Pest Management**

Deglow, Ernest Keith	Johnston, Marc Albert Peter
Drever, Mark Christopher	Setter, Robert Roy

**Degree of Master of Aquaculture**

Brousseau, Lorne John	King, Charles Frank
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★ Governor General's Gold Medal Winner- awarded Spring Convocation

\* NSERC Doctoral Prize



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**LISTING OF M.SC AND PH.D GRADUATES - SPRING 1998**

**Degree of Doctor of Philosophy**

Adames, Neil Robert	Indurugalla, Deepani
Ares, Richard Maurice	Kowalewski, Maciej Mathew Z.
Balshaw, Robert Fred	Macias-Samano, Jorge Enrique
Chertok, Daniel L.	Mimnah, Dominic James Redmond
Chu, Chu-Hui Winnie	Qiao, Peiwen
Craig, Lisa	Robertson, Gregory James
Eix, Sandra Lee-Anne	Robertson, Ian Charles
Geyer, Clarence Ronald	Shi, Hongjian
Grand, Tamara Christine★	Singh, Madhu
Hamed, Fatjalla-Abdosakik	Veitch, Dallas Patricia
Hu, Bing	Wimalaratne, Priyantha Dharshana C.

**Degree of Masters of Science**

Cullen, Sean A.	Luo, Zongshu
Donnelly, Lauren Marie	Ramsfield, Tod Donald
Egeler, Oliver	Ritchie, Steven John
Guo, Zhifeng	Robinson, Michael Elden
Harrison, Michelle Katherine	Sualang, Denny Samuel
Hicks, Jason Matthew Tory	Taylor, Carolyn Gail
Hsieh, Yih-Huang Edward	Thomas, Christine Anne
Hunt, William Andrew	Wang, Hongjun
Hunter, David Gregory	Wilcockson, John Brooke
Kalbfleisch, Heidi Kathryn	Zhang, Daqing
Lai, Kwan Wai Evelyn	Zhang, Jun Mark
Lange, Richard	

**Degree of Master of Pest Management**

Bishop, Stephanie Darlene	McNair, Crawford Norris
Bomford, Michael	Sawyer, Heidi Nadene
Hobischak, Niki Rae	

**Degree of Master of Aquaculture**

Manders, James Gordon

★ Dean's Graduate Studies Convocation Medal Winner

**LISTING OF BACHELOR OF SCIENCE DEGREES  
UNIVERSITY COLLEGE OF THE FRASER VALLEY  
SPRING 1998**

Davies, Dawn Leah	★ Keim, Stephen Lloyd
Espenhain, Jerry Owen	Maarhuis, Timothy John
Froese, Michael F.	Wedel, Corrie Beth

★ Dean's Undergraduate Convocation Medal Winner

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**BUDGET DATA**

**Faculty Salaries (CFL)**

Biochemistry	\$ 995,120
Biosciences	\$2,949,400
Chemistry	\$1,731,030
Math and Statistics	\$2,772,077
Physics	\$1,976,272
Earth Sciences	\$ 398,127

**Lab Instructor Salaries**

Biochemistry	\$ 62,644
Biosciences	\$ 333,525
Chemistry	\$ 238,048
Math and Statistics	\$ 303,256
Physics	\$ 93,966
Earth Sciences	\$ 42,452

**Support Salaries**

Dean's Office	\$ 169,178
Science Technical Centre/Science Stores	\$ 589,996
Biochemistry	\$ 134,469
Biosciences	\$ 709,186
Chemistry	\$ 597,420
Math and Statistics	\$ 275,945
Physics	\$ 376,013
Earth Sciences	\$ 77,481

**T.A. Budget**

Biochemistry	\$ 80,000
Biosciences	\$591,700
Chemistry	\$398,132
Math and Statistics	\$431,000
Physics	\$249,415
Earth Sciences	\$ 80,000

**Operating Budget**

Dean's Office	\$ 45,097
WCUMBS	\$158,450
Biochemistry	\$ 97,199
Biosciences	\$495,989
Chemistry	\$302,137
Math & Statistics	\$127,350
Physics	\$236,931
Earth Sciences	\$ 67,832

**Academic Enhancement Fund**

Earth Sciences	\$104,600
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**RESEARCH**

**RESEARCH FUNDING**

	<b>National Granting Agencies</b>	<b>Provincial Government Agencies</b>	<b>Other</b>	<b>Total Agencies</b>
Biosciences	\$2,475,035	\$1,173,659	\$1,039,305	\$4,687,999
Chemistry	\$1,720,013	\$	\$ 338,252	\$2,058,265
Earth Sciences	\$ 130,928	\$ 5,840	\$ 46,000	\$ 182,768
Math & Statistics	\$ 723,809	\$ 7,543	\$ 93,526	\$ 824,878
Physics	\$1,630,626		\$ 206,502	\$1,837,128
Wright Institute	<u>                    </u>	<u>                    </u>	<u>\$ 55,428</u>	<u>\$ 55,428</u>
	<b>\$6,680,411</b>	<b>\$1,187,042</b>	<b>\$1,779,013</b>	<b>\$9,646,466</b>

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## RESEARCH PROGRAMS OF DISTINCTION

Several important research initiatives have been at the fore over the last year.

### **The NRC National Fuel Cell Initiative**

It has been announced that NRC is proposing a \$40 million program over 4 years. Half of this money will be spent in B.C. and one quarter will flow to university projects. Within B.C., the NRC Innovation Lab at UBC will become the centre for fuel cell activities. The federal government should make a final announcement on this initiative in 1999.

### **The U. Victoria – SFU Fuel Cell Program**

The CRD program is funded by NSERC, British Gas and Ballard Power Systems and is now in its fifth year. A renewal of the program is planned. Steven Holdcroft (Chemistry) is SFU's participant in this key program.

### **The Institute for Pacific Ocean Science and Technology**

This Institute represents an amalgamation of PIAB, COFRI, and ORNEP and will bring together researchers from government (Provincial and Federal), industry and university to address forefront topics relating to:

- a sustainable ocean fishery
- climate change and the oceans
- coastal zone management and environmental issues
- mineral resources on the ocean floor
- engineering in ocean environments

John McDonald of MDA is heading up IPOST.

### **The Pacific Institute for the Mathematical Sciences**

Funding of \$600K p.a. for PImS was announced by NSERC. This major level of funding will be of considerable benefit to the Mathematics community across Western Canada.

### **The NCE on the Mathematics of Information Technologies and Complex Systems**

This NCE, centred at U. Toronto, has been funded (ca. \$15 million over 5 years from NSERC) and a substantial level of funding will flow to SFU and to the Department of Mathematics and Statistics from this source. For example, Dr. Keith Promislow will be collaborating with Ballard Power Systems and UBC on modelling gas-flow in fuel cells.

### **The FRBC Endowed Chair in Earth Sciences**

The establishment of this fully-funded endowed research chair was given planning approval by FRBC last year and Earth Sciences is now in the final steps of generating the full proposal which, on approval, should see a research chair appointed for Fall 2000.

## TRIUMF

TRIUMF will be making a submission to the federal government for renewed and increased funding for the five-year period 2000-2005. A five-year plan has been prepared, which also details TRIUMF's achievements over the last five years. The proposal will be reviewed by a NRC-appointed review committee in Fall 98.

TRIUMF will be requesting funding of ca. \$43 million p.a. over the five years of the next agreement. A major new component of TRIUMF's experimental program is the radioactive ion-beam facility (ISAC). The \$10 million building for this facility, funded by the Provincial Government, is approaching completion and the beam lines are now being installed. This facility will be operational by summer 1999. Dr. John D'Auria is actively involved in the development of ISAC and has received major funding from NSERC for the detector system (DRAGON) which will be an integral part of the experimental equipment required to follow the nuclear reactions induced by the accelerated ion-beams.

## Canada Foundation for Innovation

This major new federal government program which will see ca. \$2 billion (including the 60% match) flow into university scientific equipment and facilities over the next five years, was announced during the year.

A number of major proposals were drafted including equipment above and below \$350K and several New Opportunities initiatives for faculty. The CFI awards made (Fall 98) were as follows:

E. Verheyen/N. Harden	Biosciences	\$163K
Z.-G. Ye	Chemistry	\$108K
J. Borwein	Math & Statistics	\$136K
B.M. Pinto	Chemistry	\$43K
K. Delaney	Biosciences (Jt with UBC)	\$115K
R. Hill	Chemistry	\$160K
C. Bolognesi	Engineering Science/ Faculty of Science	\$224

Dr. J. Borwein was invited to submit a detailed proposal for the BC3 Computer Network.

## HONOURS AND AWARDS

### **Dr. John Clague – the new Shrum Chair Appointee**

During 1997-98 a search was conducted for an appointee to the Shrum Chair in the Faculty of Science. The Faculty was delighted to secure the appointment of Dr. John Clague.

Dr. Clague is an international leader in the field of Quaternary Geology and has enjoyed a 24 year career with the Geological Survey of Canada. He has published some 100 papers and his book “Destructive Mass Movements in High Mountains” is recognised world-wide and received the E.B. Burwell Jr. Memorial Award of the Geological Society of America in 1988. His papers in *Science* (1994) and *Nature* (1995) are forefront papers on interpreting the microfossil record as evidence of major earthquakes in the Pacific Northwest dating back some 300 years. In 1995 Dr. Clague received the W.A. Johnston Medal of the Canadian Quaternary Association.

In addition to his extensive research accomplishments, Dr. Clague has a keen interest in teaching and in public education. He has held Adjunct Professor appointments in both Geography and Earth Sciences at SFU, has lectured in those two departments and has served on numerous graduate supervisory committees at UBC and SFU. He has extensive experience in taking his research to the public, as evidenced through frequent newspaper articles and appearances on television and radio. The topic of earthquakes is one which obviously engenders considerable public interest.

Dr. Clague will bring important strengths to the emerging Earth Sciences program in the form of a national and international stature in the field of environmental geoscience. Indeed, since being appointed to the Shrum Chair, Dr. Clague has been made a Fellow of the Royal Society of Canada.

**UNDERGRADUATE ENTRANCE SCHOLARS (FALL 1997)**

Adams, Kenneth William  
Alfonso, Allan  
Arsenault, Jason Robert  
Astronomo, Rena  
Bandura, Melissa Ann  
Biln, Devinder Singh  
Chang, William Wei-Chung  
Chen, Gloria  
Chevalier, Erica Jemm Aileen  
Chow, Roxanne Mary  
Duffy, Kathleen Amie  
Elliott, Kyle  
Falk, Ryan Gerald  
Fonseka, Rowena Aminta  
Foster, Earl Johan  
Gakhal, Amandeep Kaur  
Groenhof, Christa Michelle  
Hodge, Victor Stanley  
Huynh, Tony Chi Thong  
Jay, Anthony  
Johner, Amanda Marie  
Ludkovski, Michael  
Macdonald, Kate Helen  
MacDougall, Gregory  
McIntosh, Andrea Michelle  
Nicklom, Jeremiah Caldwell  
Pavananthan, Sathyabama Bama  
Pinto, Kathryn Romany  
Rincon, Lilian  
Robertson, Christopher  
Robichaud, Tanya Jean  
Smith, Kiyomi  
Stasny, Michael  
Stevens, Jennifer Rae  
Sydor, Wesley Charles  
Tsang, David  
Walker, Chad  
Wang, Kui Christopher  
Weedon, Pamela Kathleen  
Whitman, Brent Andrew  
Williamson, Ian  
Wong, Michael Robert Dixon  
Yuen, Mandy Mang Mui  
Zaher, Hani



**EXCELLENCE IN TEACHING AWARDS**

**Faculty of Science**

**Faculty**

Gary Leach, Chemistry  
Alistair Lachlan, Math & Statistics

**Graduate Students**

Zenovia Ursuliak, Biosciences  
Scott Baird, Chemistry  
Mateja Saina, Math & Statistics  
Andrew McConnell, Physics

**AWARDS TO FACULTY**

Manning Award for Innovation

Keith Slessor, Chemistry  
Mark Winston, Biosciences

Hewlett-Packard  
Corporate/Higher Education  
Forum Award

John Borden, Biosciences

Hewlett-Packard  
1997 Grant Competition

Colombo Bolognesi, Physics

John Clague

Fellow, Royal Society of Canada