

Celebrating
**Undergraduate
Student Research
Excellence 2012**



UNIVERSITY
OF THE FRASER VALLEY

Welcome to the 2012 UFV

Undergraduate Research Excellence Awards Presentation

Tonight the University of the Fraser Valley is proud to present
22 students with awards totaling over \$18,000.

These students were nominated by faculty
based on exceptional research work, either as part of the UFV
work study program, as research assistants, or for
an outstanding project as part of a course.

With nearly 16,000 students attending UFV this year,
these awards represent only a small fraction of the research and
scholarly activities in which students are involved.

**Congratulations to all the students who have worked so diligently to
produce award-winning research projects!**

Special thanks to the family and friends who support our students
with patience, encouragement and fuel for both body and car.

Your contribution to student success is immeasurable!

Program

Host

Yvon Dandurand, Associate VP, Research & Graduate Studies

Welcome

Brian Minter, UFV Chancellor

Board Chair Remarks

Laurence Stinson, Chair, UFV Board of Governors

Dinner Buffet

Introduction of Student Speakers

Dr. Eric Davis, Provost & Vice President Academic

Student Speakers

Alanna Schuurmans

Jordan Ross

Awards Presentations

Dr. Susan Fisher, Associate Dean of Students, College of Arts

Dr. Rosetta Khalideen, Dean, Faculty of Professional Studies

Ian McAskill, Acting Dean, Faculty of Science

Acknowledgements of Other Awards & Closing Remarks

Brad Whittaker, Director, Research Services & Industry Liaison

National Awards

UFV is committed to providing the best undergraduate education in Canada and seeks to engage students actively in their education through a high level of interaction with faculty members and provide opportunities for practical experience, research, problem-solving and creative work.

These local and international opportunities give students a definite edge as they prepare for their further education and careers.

We are pleased to recognize some of the students who have received prestigious awards at the national level.

Natural Sciences and Engineering Research Council (NSERC)

Alexander Graham Bell

Canada Graduate Scholarship - \$17,500

<i>Student researcher</i>	<i>Program</i>	<i>Faculty support</i>
Jenna Peters	Developmental Epigenetics	Dr. Anthony Stea Dr. David Fenske

Social Sciences and Humanities Research Council (SSHRC)

Joseph-Armand Bombardier

Canada Graduate Scholarship - \$17,500

<i>Student researcher</i>	<i>Program</i>	<i>Faculty support</i>
Chad Doerksen	Social, Cultural & Media Studies	Dr. Katherine Watson Dr. Chantelle Marlor Dr. Stephen Piper

National Awards

NSERC Undergraduate Student Research Awards

These awards provide funding which allows students to gain valuable research experience that complements their studies while working with experienced researchers at UFV.

2012 Recipients - \$4,500

<i>Student researcher</i>	<i>Program</i>	<i>Faculty researcher</i>
Brandon Wiebe	Chemistry	Noham Weinberg
Brandon Yanciw	Chemistry	Noham Weinberg
Daniel Huesken	Geography	Olav Lian
Brie Mackovic	Geography	Olav Lian
Brendan Bulthuis	Physics	Derek Harnett
Timothy Richards	Physics	Derek Harnett



UFV Student Awards

Each year UFV holds a research presentation and competition on Student Research Day. More than 50 UFV students designed and displayed exceptional posters and 20 students amazed us with their fast-paced microlecture presentations at the event.

Poster Prize Recipients 2012

<i>Student</i>	<i>Program</i>	<i>Award</i>
Akyaa Addo	Biology	Provost & VP Academic
Jenna Peters	Chemistry	AVP Research & Graduate Studies

Deans' Awards

Sol Sun	Psychology	College of Arts
Jason Kowal	Global Development	College of Arts
Matthew Stoutjesdyk	Indo Canadian Studies	
Mindy Black	Business Administration	Faculty of Professional Studies
Justine Saran		
Nik Venema		
Jason Ho	Chemistry	Faculty of Science
Meagan Beatty	Chemistry	Faculty of Science
Sneha Thomas	Biology	Faculty of Science

Microlecture Presentations may be viewed at:

http://www.ufv.ca/Research/Research_News_and_Events/microlectureseries.htm

URE Award Recipients

College of Arts

Leonard Naimi	Communications
Danielle DeCosse	Criminology & Criminal Justice
Brooklyn Hoschka	Criminology & Criminal Justice
Mindy Black	Economics
Justine Saran	Economics
Nik Venema	Economics
Paul Weimer	English
Daniel Huesken	Geography
Michael Schmidt	History
Samanpreet Brar	Indo Canadian Studies
Joel Smart	Media Studies
Emily Neufeld	Philosophy
Jason Kowal	Political Science
Natasha Smith	Political Science
Michelle Mankovits	Psychology
Wade Hopwo	Sociology
David Seymour	Visual Arts

URE Award Recipients

Faculty of Professional Studies

Owen Nicholls Business Administration

Erin McMurren Social Work & Human Services

Faculty of Science

Chelsea Mackovic Biology

Brandon Yanciw Chemistry

Jason Ho Physics



Communications

Leonard Naimi

"I am graduating this June with a Bachelor of Science Degree majoring in Chemistry and minoring in Communications. My goal is to become a chemistry teacher at the high school level and to eventually attend graduate school. My interest in the topic of intercultural conflict is a result of my heritage as a member of the Bahá'í Faith which has faced persecution for 168 years in their pursuit of the peaceful unity of humankind."

Faculty Supervisor: Marcella LaFever Award: \$1,000
Program Head: David Thomson

The Baha'i Faith's Approach to Intercultural Communication and Peace Practices: A Comparison to Current Conflict Theory

The purpose of this study was to better understand intercultural communication conflict theory as it applies to peace, conflict, and religion in light of ongoing and seemingly intransigent contexts that can lead to degradation, persecution, and genocide of whole cultural groups.

In this project I analyzed two case studies (Bahá'ís in Nazi Germany and the current persecution of the Bahá'í Institute of Higher Education in Iran) for Bahá'í responses to persecution to see how they matched or diverged from current conflict resolution theory. I found that under conditions of violent oppression the Baha'i community has pursued a distinctively non-adversarial approach to social change. As a result, I posited three additional suggestions for change in conflict resolution theory.

Criminology & Criminal Justice

Danielle DeCosse & Brooklyn Hoschka

Danielle is graduating from UFV with a BA in Criminal Justice with an extended minor in psychology. She has always been interested in criminal behaviour so it only made sense to pursue a career in criminal justice. Danielle chose UFV because of its small class sizes and its reputation for having excellent faculty members and an excellent criminology department. She became interested in this project after the increased attention placed on online behaviour in the media and in working with incarcerated youth who discussed the information they posted on social networking sites.

Brooklyn is graduating from UFV, earning a Bachelor of Arts Degree in Criminal Justice. Brooklyn chose UFV as it had a greatly respected Criminology department, along with excellent faculty and small class environments for optimal learning. She has been interested in the criminal justice system since her early years of high school; in particular, working with at-risk youth. Brooklyn became interested in this project as it focused on how individuals posted personal information on public social networking sites without knowing how their behaviours could affect their future careers.

Faculty Supervisor: Zina Lee Award: \$500 each
Program Head: Irwin Cohen

Professionalism in the Realm of Facebook

This project was initiated due to the overwhelming growth and interest regarding people's behaviours on social networking sites. They chose to target Facebook as it is the fastest growing social networking site. Individual's awareness of the negative effects of social networking sites on professional careers was examined, as well as the issues surrounding the many forms of nonprofessional behaviour on Facebook, such as photos, groups, and wall conversations. This study found that participants were aware of the negative consequences of Facebook and that males had a more negative attitude towards the site. The study also suggested that professionalism on Facebook is dependent on age, as it was shown that younger participants reported a greater use of privacy settings and appeared to be more cautious of the materials they posted. According to these findings, it appears that university students are becoming more aware of how their actions on Facebook may negatively affect their future career development.

Economics

Mindy Black, Justine Saran & Nik Venema

Mindy: "This June I am graduating from UFV with a Business Administration Degree with a minor in Economics. I've really enjoyed my time at UFV and this research project was a great way to cap it off. When I was first approached to do this project I didn't really know what I was getting into, but it turned out to be a great experience. I enjoyed working with such a talented team, and being able to use my classroom knowledge in a real world application."

Justine: "I am graduating from UFV with my Business Administration degree with a Finance concentration and a minor in Economics. Currently, I am employed at Royal Bank of Canada and I am enrolled and studying for the Canadian Securities Course. My career goal is to become a certified Financial Planner. I became interested in the CFA Institute Research Challenge because I knew it would be a great learning experience."

Nik: "I decided to take on this project with Mindy Black and Justine Saran to apply the analytical, statistical, and financial skills that I have been developing over the past four years of my undergraduate degree in Finance under the supervision of the Economics, Statistics, and Finance faculty. I will be writing the Chartered Financial Analyst Level 1 test in June and starting a MSc. Finance this fall at SFU's Segal Graduate School of Business in downtown Vancouver. None of these opportunities would have been possible without the close professional relationships I have been able to cultivate with the faculty at the University of the Fraser Valley; it is without a doubt that it was the frequent interaction with my instructors and the genuine interest they have shown for my success which has prepared me to take on a project of this magnitude and pursue further advanced education."

Faculty Supervisor: Vlad Dvoracek Award: \$350 each
Canfor Supervisor: Elvis Picardo

CFA (Chartered Financial Analyst) Institute Research Challenge 2012: Canfor Corporation

The CFA Institute Research Challenge gathers together students, investment professionals, and corporations for local, regional, and global competition. This annual educational initiative promotes best practices in equity research through hands-on mentoring and intensive training in company analysis and presentation skills. As part of the CFA Institute Research Challenge, our team developed a sell-side equity analysis of Canfor Corporation - a publicly traded Canadian forest products company.

For six months, our team researched and analyzed market data to find the necessary information to value Canfor equity. The research included an investigation of the company, its corporate and management structure, the industry, and relevant macroeconomic factors. We used a pricing estimate using two different valuation techniques: (i) a market based ratio valuation using enterprise value to EBITDA (earnings before interest, tax, depreciation and amortization) and (ii) a free cash flow valuation using a Monte Carlo simulation with an embedded commodity price mean reversion process for Canfor's major outputs, lumber, pulp, and paper. We also conducted two sensitivity analyses and a risk analysis to provide our final investment recommendation.

Our investment recommendation was a Buy based on a weighted average valuation which yielded a one year price target of \$13.69. This target generated a 19.25% upside on the stock. We submitted our written report to the competition on February 2 and presented our work, along with six other teams, to a panel of three judges downtown Vancouver a month later.

English

Paul Weimer

"Before meeting my wife and moving to BC I lived in Wisconsin where I did my first two years of university. Deciding to go back to school at UFV was an easy decision as my credits transferred over easily, and it has the affordability, proximity, and intimacy that are highly sought after qualities in a university. I have just finished my Bachelor's degree at UFV with an English major and Visual Arts minor and have applied to the PDP program at SFU to teach secondary (high) school. This project was very fitting with my goals as it specifically researched, as well as implemented strategies of teaching composition."

Faculty Supervisor:	Rhonda Schuller	Award: \$1,000
Program Head:	John Pitcher	

Writing Assignment Portfolio: Four Writing Assignments for an Introductory Composition Course

The aim of this project was to create assignments for a mock composition course based on not only current pedagogical methodologies/philosophies, but on my own experiences as well. The project outlines the course through four chronologically ordered writing assignments. Each assignment consists of a rubric that would be handed out to the students, followed by a detailed account of the research and reasons that legitimize the assignment as being both appropriate and effective.

Since the project is dealing with an introductory composition course (English 105 or the like), there were two main goals that I was striving toward. First—keeping in mind that this would be students' first experience with writing at a university level—each assignment aims at bringing students to learn the essential basics involved with essay writing, citation, and research. The second goal of the assignments attempts to bring students to the realization that the more personally invested they are in their writing, the more likely it is to be effective.

My research into introductory composition led me to the conclusion that assignments that are able to synthesize the learning of essential writing 'skills' with topics that they will be able to invest in beyond a superficial level are much better equipped to elicit satisfactory writing than assignments that only aim at the former.

Geography

Daniel Huesken

“The adventurous outdoors has always captivated my interest and passions, so the opportunity to study the morphology of the landscape is a natural fit. Over the past two years I have worked on numerous projects in the Luminescence Dating Laboratory at UFV, ranging from ancient sand dunes in Saskatchewan to the timing of sub-glacial volcanic events in Wells Grey Provincial Park. UFV Geography provides a great opportunity for undergraduates to engage in exciting research both in research laboratories and in the field.”

Faculty Supervisor: Olav Lian Award: \$1,000
Program Head: Michelle Rhodes

Using Optical Dating to Calibrate Vegetation and Climate History of the Fraser Glaciation on Southeastern Vancouver Island, BC

Widespread glaciation and associated changes in climate from about 30,000 to 12,000 years ago were formative for the modern biota of Vancouver Island, British Columbia. An important new exposure revealing ancient sediments and organic matter has been identified at Osborne Bay, southern Vancouver Island, that can be used to reconstruct the environment at this locale over the entire last-glacial interval. We used this site to assess the utility of optical dating of the fine-grained (silt-sized) feldspar mineral fraction specific to the region. Sedge fragments extracted from a peat bed at the base of the sequence yielded a radiocarbon age of $24,140 \pm 110$ years.

An optical dating sample (OBFS2) consisting of estuarine silt and sand was extracted above the radiocarbon-dated sedge remains. Sample OBFS2 yielded an optical age of $24,500 \pm 2400$ years which is consistent with the sedge age. OBFS2 is directly associated with the radiocarbon age which allowed for our optical dating procedures to be tested and then applied in the upper sequence where organic material is absent. A second sample (OBFS1) from the upper sequence produced a optical age of $47,500 \pm 13,500$ years. This age is consistent with the stratigraphy when the analytical uncertainty is taken into account, but the age is likely too old due to deposition in a fluvial (stream) environment that prevented all of the sediment grains to be exposed to sufficient sunlight before burial.

Our research has, however, shown that optical dating of sediments at Osborn Bay using fine-grained feldspar is feasible if the correct depositional environment is chosen.

History

Michael Schmidt

“I was born and raised in Abbotsford and chose to complete my Bachelor of Arts degree at UFV. My love for history led me to declare a history major, take History 440: Local History for the Web, and explore my Mennonite roots. I plan to pursue a career in teaching ESL and history at the high school level.”

Faculty Supervisor: Scott Sheffield Award: \$1,000
Program Head: Alisa Webb

Split Loyalties: Fraser Valley Mennonite Service in the Second World War

My historical research project focused on the Mennonites of the Fraser Valley. It incorporated materials found at local archives and libraries, which included secondary source material, autobiographies, newspaper articles, and church records. The Mennonites formed a tight knit community and emphasized pacifism and, therefore, one would expect them to have eschewed involvement in the Second World War with one voice. However, my research demonstrates that there was great diversity in the responses from Fraser Valley Mennonites toward the war: some joined the army as soldiers, others enlisted in the Medical Corps, and still others served in Alternative Service Work (ASW) camps in Canada.

Surprisingly, this research suggests that the majority of Fraser Valley Mennonites enlisted in the armed forces, either in combat or non-combat roles, despite qualifying for Conscientious Objector (CO) status. Unfortunately, those men who enlisted and bravely served on the battlefield were generally rejected by the larger Mennonite community.

View more *History on the Web* projects at:
<http://app.ufv.ca/fvhistory/studentsites.html>

Indo Canadian Studies

Samanpreet Brar

Samanpreet recently completed her Bachelor of Business Administration degree at UFV with accounting and Finance concentration. Saman chose UFV because of its great professors and small class sizes. Her educational goal is to obtain a Master's degree in Business Administration. She worked at the Center for Indo Canadian Studies (CICS) on one part of a comprehensive 100 Year South Asian History Project. Saman was noted by her supervisors for her dedication and passion towards the research.

CICS Director / Supervisor: Satwinder Bains

Award: \$1,000

100 Year Pioneer Project

This project has undertaken to interview pioneers (or their descendants) in order to record oral histories that have not previously been recorded. This project has been breaking down the barriers that exist in Canadian history that is largely silent on the contributions, trials and tribulations of immigrants from India at the turn of the last century.

Saman has transcribed and narrated the interviews focusing on comparing the journey and the early settlement phases of the pioneers in Canada to those that followed in the history of Canadian migration. The research she undertook has been painstakingly crafted from documentation and interviews that the Centre has been collecting for the last four years.

For Indo Canadian Studies this work is ground-breaking as this historical record has hitherto been unknown and unrecorded in any comprehensive manner. This work will help the Centre in building an archival record much needed for our community.

Media Studies

Joel Smart

Joel is a 26-year-old Bachelor of Arts student at UFV who spends much of his time working as the copy editor (and as a writer) at *The Cascade* newspaper. His academic interests are primarily centered around gender, human rights and social justice. He has worked extensively on the field of infant genital cutting, as he seeks to gain insight into both the social pressures that cause it to persist and the legal ramifications of non-therapeutic violations of the guaranteed human right of bodily integrity. After he graduates, he intends to go on to graduate school to continue his research and study.

Faculty Supervisor:

Chantelle Marlor

Award: \$1,000

Program Head:

Stephen Piper

Disgust, Disease and Danger: Gendered Attitudes towards the Genital Cutting of Children

This a qualitative research project began with the question: "How do Canadian attitudes vary with regards to the practices of male and female genital cutting in both local and international contexts?"

Through a detailed literature review, three in-depth interviews with Canadian university students and a random sample of online discussions, the project found major differences in the way male and female genital cutting are viewed. Disgust played an important role in keeping normalized genital cutting practices from being challenged – both by disparaging the "uncut" natural body part, and through comparisons to other, unaccepted genital cutting practices.

The project also noted a shift in the way genital cutting was viewed among Canadians, as the practice of infant male genital cutting has begun to fall out of public favour, due to increased education and the removal of health care funding for the practice.

Philosophy

Emily Neufeld

"I have just finished my second year of Bachelor of Arts studies at UFV. I chose mathematics as my major field of study, but I have an ardent fascination with philosophy, and the various ways in which these two unique fields intertwine. After graduating with a Bachelor of Arts in Mathematics, I hope to go on to study mathematics in graduate school."

Faculty Supervisor: Moira Gutteridge Kloster Award: \$1,000
Program Head: Hamish Telford

Consistency versus Completeness: Gödel and Logical Undecidability

Of great concern to many philosophers and mathematicians in the early nineteenth century was the consistency and completeness of mathematical logic. Their goal was to create a system of definitions and rules that could describe logical thought, and, in the words of German mathematician David Hilbert, *"To prove that they are not contradictory, that is, that a definite number of logical steps based upon them can never lead to contradictory results."* With such a system, one could prove any result, because the system is complete, and said result would be definitely true meaningful, because the system is consistent. In 1931, however, Kurt Gödel proved that these two conditions could not be met simultaneously in his paper "On Formally Undecidable Propositions of the Principia Mathematica and Related Systems." Many took this result to imply that Hilbert's ambition was no more than an unachievable dream, and that we cannot get what we want from formal logic.

This paper re-examines Gödel's result, and shows that despite its limitations, formal logic remains a useful tool that we can apply to derive meaningful results – furthermore, this paper postulates that though it is possible that Gödel did uncover intrinsic flaws in formal logic, it is also possible that these flaws can be traced back to the structure of human thought and language, and are in fact aspects of how we reason. In other words, Gödel's result did not serve to shatter Hilbert's dream, but rather illuminate it further.

Political Science

Jason Kowal & Natasha Smith

Jason: "I'm pursuing a Bachelor of Arts in Geography with an Extended Minor in Political Science; I've also studied Modern Languages through UFV at advanced competency levels. I intend to continue my education at law school, and I hope to one day become a lawyer, professor, or politician! The value of my time and education at UFV is immeasurable, and the combination of small class sizes and teachers that encourage both academic and extracurricular success will carry me well in my future endeavors."

Natasha: "I am completing my degree at UFV with a major in Political Science and a minor in Anthropology. I intend to pursue a graduate program in Indigenous Governance, which I hope one day leads to teaching Indigenous politics at the post-secondary level. UFV has given me the unique opportunity of smaller classroom settings, as well as working closely with my instructors (my elders) who I feel have given me invaluable guidance and support throughout my academic journey."

Faculty Supervisor: Rita Dhamoon & David MacDonald
Program Head: Hamish Telford Award: \$1,000

Youth Political Participation in the Fraser Valley: The Young and the Restless?

There is a popular notion that in many parts of Canada youth are increasingly apathetic about politics, that they are disinterested or unwilling to take part in the governance of our society and the determination of our future. If this apathy was intrinsic to youth participation in politics, then democracy would be in serious trouble. A solid understanding of how, and if, youth are participating in politics is necessary to begin to address the perceived issue of youth apathy.

The research included surveys of students at UFV, and building connections with members of the Stó:lō Nation to gather additional information and a literature review. Particular attention was paid to Indigenous youth politics as they take on an additional dimension that is not present in wider society.

The results of research indicate that youth want more civics courses at an earlier age, as well as internet and cell phone based methods of voting. One of the most popular 'solutions' to political apathy in young Canadians, the lowering of the voting age, was notably absent in our data. This suggests that current efforts at improving youth political participation may be misguided or misdirected and that greater effort should be spent inviting and introducing youth into the political dialogue about political participation.

Psychology

Michelle Mankovits

Michelle has an interest in early child development within the context of the family, and she has shared this research interest with Dr. Patricia Ackland through a directed studies project and an Honours thesis. Michelle will graduate this summer with a B.A.(Hons) and plans to pursue graduate studies in the area of early child development and parenting practices.

Faculty Supervisor: Patricia Ackland Award: \$1,000
Program Head: Zoe Dennison

Adult vs. Child Attachment in Parent Programs: A Comparative Study

A review of clinical studies suggests that 25-33% of families who participate in current parenting programs do not show benefits after participation (Scott & Dadds, 2009). This suggests the need to provide more effective parenting programs. While many traditional parenting programs address child attachment, alternative programs have been developed which instead address adult attachment (e.g., Bakersmans-Kranenburg et al., 1998; Siegel & Hartzell, 2004; Velderman et al., 2006). However, the clinical utility of such adult attachment-based programs remains under researched and unclear.

The present pilot study explored the effectiveness of two preschool parenting programs that addressed either adult attachment or child attachment, in reducing parenting stress and child behaviour concerns. Thirteen parents of preschoolers who self-reported child behaviour concerns were assigned to one of two 8-week parenting programs.

Parents who participated in the program that addressed adult attachment reported significant decreases in child-related parenting stress. Parents who participated in the program that addressed child attachment reported significant decreases in parent-related parenting stress. No significant changes in child behaviour concerns were reported by parents who participated in either program. These results suggest that addressing adult attachment may be of value in parenting programs and that similar larger-scale research is warranted.

Sociology

Wade Hopwo

"I became interested in doing this project while volunteering at YouthCo as a core group member of the mPowerment program. In my future I plan on graduating in 2013 and applying to grad schools in Ontario or potentially overseas. Hopefully, I will delve into the world of marketing, advertising and social research once I have completed all of my education, as well as continue to travel and explore beyond the parameters of North America."

Faculty Supervisor: Chantelle Marlor Award: \$1,000
Program Head: Stephen Piper

Grinding Through Grindr

My project focused on Grindr: a gay male oriented "dating" application for Smartphones and whether or not it fosters avenues for its users to connect that elevate the risk of having an unsafe sexual encounter.

Through a qualitative analysis of gay oriented blog sites, as well as interview responses from young Grindr users, the study found that Grindr is used predominately for hookups and that unsafe sexual encounters are not uncommon. A new study by H.I.M. (Health Initiative for Men) has found that 1 in 35 of young, gay, men ages 18-30 in Vancouver are HIV+ and unaware of their status and that HIV infections amongst this particular group have risen at an unnerving rate.

With this age demographic being technologically attuned and Grindr holding popularity within the gay male community, this study is beneficial in working toward finding a solution or reduction in the transmission rate of HIV in Vancouver's gay youth aged 18-30.

Visual Arts

David Seymour

“This September, I will be entering my third year at UFV, pursuing a major in History and a minor in Art History. After I graduate, it is my ambition to be involved, in some capacity, with museums and art galleries. For the upcoming academic year, I will be travelling to study abroad at the University of Sunderland in the United Kingdom. While studying there, I wish to acquire an enriching personal experience and to become acquainted with the innumerable cultural landmarks which the UK has to offer. I am very happy to attend UFV, I especially enjoy the quality of teaching and great attention given to students. Particularly, I enjoy its small class sizes which offer students and professors the opportunity to interact with one another in pursuing knowledge.”

Faculty Supervisor: Aleksandra Idzior Award: \$1,000
Program Head: Shelley Stefan

The Unknown Figure:

The Allure and Function of the "Other" in Ancient Art

My essay focuses on the comparison between the favourable representation of society's elite and the unembellished representation of society's marginalized class, or the so-called "other" in ancient Egyptian and Greek art. Each culture respectively reinforced its dominant values by depiction of and, at times, fascination with the construct of the "other." On one hand, powerful figures and art patrons and powerful figures were traditionally represented in a favorable and idealized manner. On the other hand, members of the lower classes, the outsiders, or people from the margins constituting the antithesis of the dominant group were depicted not to subvert, but to maintain the status quo.

I concluded that although the influence of the privileged elite was undeniable, without the so-called "other", the grandeur of the elite few would not have appeared so impressive. Thus literally, one group could not have existed without the other as demonstrated by the artwork produced in ancient Egypt and Greece.

Business Administration

Owen Nicholls

“I chose to research this topic because one of my long term goals is to work into upper management within a reputable company, and as such I am interested in leadership. I will be completing my Bachelor of Business Administration degree this summer from UFV with a minor in economics. Following my degree I'm hoping to spend some time with my wife, travel, and begin my job search.”

Faculty Supervisor: Joe Ilsever Award: \$1,000
Program Head: Raymond Leung

The Significance of Transformational Leadership in Relation to Innovation

This study aimed to determine the impact of the transformational leadership style on organizational innovation. In a more applicable context, the purpose was to inform managers within what bounds and limitations the findings can be applied within their organization.

The research found that most of the studies being conducted are extremely homogeneous in nature and do not consider a variety of variables and contexts. Therefore, it is proposed that a globally orchestrated study that encompasses a multitude of cultures, countries, industries, etc., be conducted to determine if transformational leadership is positively correlated to transformational leadership in a broad sense across these entities. Management should consider the fact that applying transformational leadership within an organization will not necessarily be cohesive to innovation as there are a variety of other factors that must be considered.

Finally, it is suggested that both academics and corporations study and consider the possibility of taking a synergistic approach to leadership style. This style would be a culmination of multiple leadership styles. Since innovation in all aspects of an organization is essential to maintaining a competitive advantage in a dynamically changing global economy, it is necessary that companies pursue innovation in its style(s) of leadership as well.

Social Work & Human Services

Erin McMurren

"After completing a Bachelor of Arts in Criminal Justice I entered the social work degree program and will graduate with my BSW in June 2013. Following this, I plan on obtaining my Masters in Social Work, and my ultimate goal is to help develop social policy and work with children and youth in mental health. I became interested in this project because I wanted to broaden my research skills. Prior to this project, I had little research experience with intimate partner violence against women, and I appreciate the opportunity to learn about this topic with a project that directly relates to the Fraser Valley."

Faculty Supervisor: Lisa Moy Award: \$1,000
Program Head: Elizabeth Dow

Negotiating Divides and Forging New Directions in Domestic Violence Interventions: A Fraser Valley Case Study

The broad purpose of this research is to explore collaboration and community partnerships as a means of reducing the harm of violence against women and children in family relationships. Specifically, this research explores--through interviews with agency staff, past clients and community partners-- the ways in which an anti-violence and family support organization in the Fraser Valley cultivates coalitions with community allies.

The findings from this research project help highlight practices for anti-violence work and alliance building across various political and ideological contexts.

Biology

Chelsea Mackovic

"I have enjoyed studying at UFV for the past years due to its excellent teachers, and their commitment to their students. I became interested in studying Integrated Pest Management while completing co-op work terms for Todd Kabaluk at Agriculture and Agri-Food Canada. In September I will be studying at Boucher Institute of Naturopathic Medicine to complete my goal of becoming a Naturopathic Doctor."

Faculty Supervisor:	Sharon Gillies	Award: \$1,000
AAFC Supervisor:	Todd Kabaluk	
Program Head:	Allan Arndt	

Method of Measuring the Carbon Dioxide Production of Respiring Biological Samples in Passively Ventilated Chambers

Our project used passively ventilated chambers, infrared carbon dioxide sensors, and HOBO data loggers to measure the amount of carbon dioxide produced by fermenting rolled oats, and germinating wheat seeds. By determining a computation-based approach for measuring the amount of carbon dioxide generated by materials, we can determine the material that generates carbon dioxide the fastest, and in the greatest quantity.

Materials that produce carbon dioxide are used as a bait in traps to attract the agricultural pest wireworm, *Agriotes obscurus* [Coleoptera: Elateridae], since they are attracted to materials that generate carbon dioxide. By determining a material that generates carbon dioxide quickly, and at high quantities, we can use this material to increase the speed, and efficacy of wireworm catches.

Chemistry

Brandon Yanciw

Brandon has completed four years at UFV, studying chemistry and biology. He chose UFV because of its convenient location and the small class sizes. During his study, he joined Dr. Weinberg's research group for computational chemistry and has appreciated the research he has been a part of so far.

Faculty Supervisor: Noham Weinberg Award: \$1,000
Program Head: David Fenske

Potential Energy Surfaces of Reaction Systems Under Extreme Pressure

Potential energy surfaces are multidimensional graphs that relate potential energy to molecular configurations. These surfaces can be used to determine information about a reaction such as the reaction coordinate, activation energy and structures of stable or transient species. This knowledge is useful because it provides insight towards how a chemical reaction occurs at the molecular level.

Often, potential energy surfaces are calculated in a vacuum where no pressure is considered. Here we developed a model to simulate pressure and, by subjecting a system to this model, we were able to calculate potential energy surfaces for reaction systems under extreme pressures.

The results show how a chemical reaction can change when it is subjected to an extreme pressure: reaction pathways, activation energies and structures of species can all undergo dramatic changes.

Physics

Jason Ho

Jason Ho has been involved in research opportunities at UFV since January of 2008, under the guidance and mentorship of Dr. Noham Weinberg. His introduction to the research at UFV began as part of a high school science project, done in collaboration with the Molecular Modelling lab at UFV, and his participation in the research activities at the University continued through to this day. After graduation, Jason plans to pursue graduate studies in the area of theoretical physics.

Faculty Supervisor: Noham Weinberg / Derek Harnett Award: \$1,000
Program Head: Norm Taylor

A New Technique for Calculation of Thermodynamic Properties of Hydrocarbons at Geochemical Conditions

Using classical molecular dynamics simulations, a new computational methodology for obtaining accurate thermodynamic functions of oil components within a large temperature and pressure range was developed. Knowledge of thermodynamic parameters of oil components in their pure forms and in mixtures is vital to understanding the properties of petroleum.

Better grasp of their thermodynamic properties at extreme conditions is crucially important both for our understanding of the processes of oil formation and for our ability to design and engineer new methods of synthetic oil production.

UFV – 2011 Highlights

The University of the Fraser Valley continues to make significant contributions to the educational, cultural and economic landscape of our region. In 2011, UFV:

- Once again celebrated earning top marks in the Globe and Mail's Canadian University Report, maintaining our lead as the top public university in British Columbia, and one of the top in Canada.
- Awarded more than 2,100 credentials to 1,944 students.
- Received more than \$750,000 in donations and pledges from our generous community of donors.
- Continued preparations to move Chilliwack campus into modern facilities at the Canada Education Park on the former CFB Chilliwack.
- Launched the Faculty of Health Sciences on Chilliwack campus.
- Announced the Pacific Berry Resource Centre partnership, a collaboration with the British Columbia Blueberry Council (BCBC), Raspberry Industry Development Council (RIDC) and the Fraser Valley Strawberry Growers Association (FVSGA).
- Strengthened our partnership ties with China, as president Mark Evered, horticulturalist Tom Baumann and UFV China liaison officer Betty Wang toured five cities to meet with partner universities.
- Continued our strong relationship with post-secondary institutions in India.
- Teamed up with HAS Den Bosch University in the Netherlands to present a one-day symposium on the horticulture industry.
- Celebrated Abbotsford's historic Gur Sikh Temple centenary.
- Joined more than 50 faculties of education across Canada in signing an Accord on Indigenous Education.
- Announced Dr. Lenore Newman as the Canada Research Chair in Food Security and Environment.
- Provided numerous opportunities for UFV and Tanzanian students to participate in international community development internships through AUCC and CIDA programs.

- Supported more than 10 students invited to present at national and international professional conferences.
- Conducted a research project focused on kids with Fetal Alcohol Spectrum Disorder for the third year in a row.
- Watched as fashion student Sabrina Breitenmoser was named one of the top five designers at the prestigious Telio competition, and was later featured in Elle Canada.
- Presented social worker extraordinaire Patsy George with an honorary degree from UFV, and also gave one to media personality Vicki Gabereau and aboriginal science education pioneer Madeleine MacIvor.
- Congratulated MA Criminal Justice grad Brian Young as he won the UFV Governor General's gold medal, Abbotsford's Melissa Prachnau (BSc grad) for winning silver, Computer Information Systems student Donna Enos for receiving bronze, and agriculture grad Alicia Powell for earning the Lieutenant Governor's silver medal.
- Took pride in UFV Distinguished Alumni winner Shirzad Ahmed being recognized for human rights work.
- Hosted science camps, science fairs, electoral debates, HST forums, numerous guest speakers, conferences, micro-lecture lunch hours, a university lecture series featuring noted UFV faculty members, and a president's lecture series featuring noted community guests.
- Watched as UFV kinesiology students were Champions for Health in Antigua.
- Were excited for student nurses as they travelled to Belize on a new study tour option.
- Hosted training sessions for potential Making Africa Work volunteers.
- Launched the UFV Today blog, which keeps students, staff, and the community up-to-date on the news, events, and overall happenings of the university and its students.

Visit our web site for more exciting news & events – www.ufv.ca

Special Acknowledgement

*UFV and especially the Research & Graduate Studies department would like to acknowledge the immense contributions of **Yvon Dandurand**, Associate Vice President of Research & Graduate Studies.*

Over the past 10 years, Yvon has provided many opportunities for faculty and students to pursue their research interests, enabling them to develop their research programs and accomplish their research goals.

Our deepest gratitude, Yvon!

Thank you for joining us to celebrate this special recognition of student achievements!





The University of the Fraser Valley (UFV) is a comprehensive, regional post-secondary institution that enrolls more than 16,000 students per year and is larger than half the universities in Canada. Nestled in the beautiful Fraser Valley just east of Vancouver, British Columbia, UFV has campuses in Abbotsford, Chilliwack, and Mission, and regional centres in Hope and Agassiz.

UFV focuses on teaching excellence, with the highest priorities for research being to support teaching and to address local issues and regional needs. Faculty, staff, and students are engaged in a significant number of research projects that both enrich the environment of the university and contribute to the development of the Fraser Valley region.

