

Program

Welcome

Dr. Garry Fehr, Associate Vice President
Research, Engagement, and Graduate Studies

Board Chair Remarks

Mr. John Pankratz, Chair, UFV Board of Governors

Dinner Buffet

Provost & VP Academic's Remarks

Dr. James Mandigo, Provost and Vice President Academic

Student Speakers

Ms. Heather Kelly, Biology, Faculty of Sciences
Mr. Nafeel Arshad, School of Kinesiology

Acknowledgement of Student Awards

Dr. Garry Fehr, Associate Vice-President

Awards Presentations

Dr. Sylvie Murray, Dean, College of Arts
Dr. Alastair Hodges, Dean, Faculty of Health Sciences
Dr. Chris Schinckus, Dean, Faculty of Professional Studies
Dr. Lucy Lee, Dean, Faculty of Science
Dr. Tracy Ryder Glass, Vice Provost and AVP Academic

Closing Remarks

Welcome to the 2022 Undergraduate Research Excellence Awards Presentation

Tonight, the University of the Fraser Valley is thrilled to present 26 students with research awards totalling over \$25,000.

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

Since inception, these awards have provided almost 500 puzzle solving students with over \$345,000.

We also acknowledge students who received prestigious awards from UFV, the Ministry of Advanced Education, Skills & Training, federal granting agencies, and other external organizations.

Congratulations to all the students whose participation in research helps them attach amazing experiential learning pieces to their education. Connecting knowledge, skills, and experience with creative minds provides the corner pieces of a solid foundation!

With more than 15,000 students attending UFV this year, these awards represent only a small portion of the research and other experiential learning activities which students are involved in that adds to the big picture of their UFV education.

*Puzzling times call for
great researchers*



A Message from the President

Dear Undergraduate Research Excellence Award Winners,

While it is my absolute pleasure to send you my congratulations, I am sorry I cannot honour you in person at what is one of my favourite events at UFV.

Over the last couple of years, the world has faced unprecedented change and challenges. And in facing challenge, history has shown research to be a catalyst for solving the world's most pressing issues. However, this work does not promise to be easy, and answers to the most important questions require dedication to unravelling complexity while engaging meticulous and rigorous approaches to creating understanding. This is the work of researchers: your work.

Your engagement in research, without a doubt, has tested you. There may have been moments of true difficulty when nothing seemed to make sense or come together as you had hoped. There may have been dead-ends along the way. And at those times, it is important to remember that there is much to be learned from failure, from results you did not expect.

I'm proud that you've had this learning opportunity at UFV and hope you will take your experience and skills and make this increasingly complex world a better place with them.

Please take pride in your achievement, as I know that your faculty supervisors take pride in you! And I sincerely thank and applaud all of the faculty members who have mentored you along the way.

Research and teaching are the core functions of our institution and are fundamental in fulfilling our mission of engaging learners, transforming lives, and building community.

Best of luck for many more future successes.

Joanne MacLean

President and Vice-Chancellor

Student Speakers

We are delighted to have two student speakers this evening selected from our Student Research Day Micro-Lecture presenters.

Nafeel Arshad

After four wonderful years at the University of the Fraser Valley (UFV), I am graduating this June with a Bachelor's degree in Kinesiology (major in Active Health). Throughout my time at UFV, I have participated in numerous extracurricular activities that have provided me the opportunity to learn and grow as a student and individual. I was a Supported Learning Groups Mentor for KIN 170 (Human Anatomy), I have served on executive boards for the Kinesiology Students Association, the UFV Health and Medicine Club, and the UFV Stem Fellowship. I was a Level-3 Mentor for UFV Lead and was a member of the 2021 UFV KIN Games Team! Most recently, I have embarked upon my research journey, working with Dr. Amanda Wurz to explore the experiences of individuals diagnosed with cancer. I have been a co-author on an abstract presented at an international conference, am a co-author on two forthcoming manuscripts, and will be assisting with community outreach to share the findings of the projects I have been engaged with.

I have also been heavily engaged in my community, as a mentor for Big Brothers Big Sisters, a volunteer in at Tabor Home, and most recently, as a support worker with the Canucks Autism Network. I am also fortunate to have been elected as a standing member of the National Youth Mentoring Advisory Council of Canada since 2019. My involvement with these organizations was acknowledged with a 2019 volunteer of the year award from Big Brothers Big Sisters and a nomination for the Abbotsford Community Foundation's volunteer of the year award in 2020.

Currently, I am working as a pharmacy assistant and a community recreation leader at the Abbotsford Recreation Center and will maintain my involvement as a research assistant with Dr. Wurz. During my free time, I love playing basketball and working out at the gym. You can always count on me being outdoors over the weekend, either hiking up

a mountain or taking a peaceful stroll on the beach with my family and friends. I am a first-generation immigrant from Pakistan and have happily called the Fraser Valley my home for over 19 years!

I aspire to one day become a psychiatrist so that I can work to improve the mental health and quality of life of as many individuals as possible.

Student Speakers

Heather Kelly

This past semester I completed my Bachelor of Science degree with a major in Biology. I grew up in the Fraser Valley and decided to come to UFV in 2018 after being awarded the President's Entrance Scholarship. During my time at UFV, I was amazed at the wide variety of experiences I was able to take advantage of. I spent the past three years in Dr. Lucy Lee's lab conducting research with Dr. Justin Lee, and during that time I was awarded two NSERC USRAs. I was also the Academic Vice President of the Biology and Chemistry Student Association (BCSA) and the President of the Student Leisure Outdoor and Wilderness Club (SLOW) for the past two years. Additionally, I served as a Student Representative on the UFV Science Faculty Council. I also excelled academically, and I am very honoured to be the 2022 UFV recipient of the Governor General's Academic Silver Medal. In the fall I will be continuing my work in the Lee Lab with funding from my most recent NSERC USRA. I also hope to continue hiking and travelling in my spare time. My eventual career goal is to work as a family doctor in the Fraser Valley; therefore, I hope to continue my education by attending medical school in the near future. I am excited to continue building on the set of invaluable skills I gained during my time at UFV.

*it's not about the pieces but
how they work together*



UFV Undergraduate Research Excellence Award Recipients

Community Service Research

Sarah Thomasen – Child, Youth, and Family Studies

Indigenous Research

Shelby Davis – Teacher Education

Carlanna Thompson – History

College of Arts

Olivia Daniel – Anthropology

Maegen Sargent – Art History

Avitasha Chand – Communications

Daniela Castroparedes Herrera – Criminology & Criminal Justice

Adena Penner – Economics

Caroline Zenky – English

Colby Stinson – History

Thomas Wilson – Media and Communication Studies

Ian Boese – Philosophy

Adam Magalhães – Political Science

Michelle Grafton – Psychology

Brooke Higginbottom – Sociology

Mia Davison – Theatre

Faculty of Health Sciences

Katrina Frankenberger – Kinesiology

Nicole Cusick – Nursing

Faculty of Professional Studies

Addy Schnider – Business

Trisha Kumar – Business

Chanzo Muema – Computing

Faculty of Science

Heather Kelly – Biology

Bach Nguyen – Chemistry

Jennifer Heldt – Environmental Studies

Faculty of Education, Community, and Human Development

Lauren Rae Peterson – Teacher Education

Sara Hoffman – SWHS



*you'd be surprised how often
'what if' works*

Community Service Research

Sarah Thomasen

Child, Youth, and Family Studies

Faculty Supervisor: Mark Littlefield

Award: \$1,000 each

Sarah: Sarah Thomasen is currently in her fourth year of her Child and Youth Care bachelor's degree (CYC). Her goal is to graduate at the end of 2022 and find employment within the Langley School District as a Child and Youth Care worker. Conducting a research study under the direction of Mark Littlefield has enriched her education by learning to utilize her CYC resources, activities, and supportive network. She chose to do a continuation of this project as she felt it was important to assess the impact of her third-year practicum experience.

Sleep Hygiene Education Study

Sleep hygiene refers to habits that aid in getting a good night's sleep. Bad behaviours that have been repeated over years, are often the source of common sleeping difficulties. If optimum sleep habits are not met, it can result in lower academic achievement and poor mental health. Within this project, good sleep hygiene practices were identified, and fun resources were provided to caregivers and students aiming to improve sleep quantity and quality! It was through the Middle Years Development Instrument (MDI), that they learnt about Abbotsford's grade 4 and 7 students scoring lower than other students for good sleep hygiene practices. After receiving this information, the Abbotsford Middle Years Committee and Sarah Thomasen (UFV CYC student in her third-year practicum) chose to develop an information campaign surrounding the importance of sleep to raise awareness. The social media campaign and educational flyers evolved into a research survey to learn more about the impact of our education. The results of the survey revealed an increase in sleep hygiene knowledge as well as increased sleep hours. It was discovered that anxiety was the most common pre-existing condition interfering with sleep. This is an area that may benefit from further research.

Indigenous Research

Carlanna Thompson

History

Faculty Supervisor: Scott Sheffield

Award: \$1,000

Carlanna: I am graduating this semester with my Bachelor of Arts in History Honours and a minor in English. I have always been a little obsessed with the past. As a kid, I devoured book after book about historical events and imagined what it would have been like to live through them. Little did I know, I was developing a sense of historical empathy that would serve me well not only as a researcher, but as a future educator. My dream is to write historical graphic novels to help spark curiosity about the past in children and young adults. I look forward to becoming an educator and using the skills I've honed at UFV to pass the stories of the past on to a new generation.

(Re)Indigenizing the Creator's Game: Settler Colonialism and Lacrosse's Journey from Haudenosaunee Hands in the East to Stó:lō Hands in the West

Taking a public history approach, my website traces how the Creator's Game, an Indigenous sport, was adopted by non-Indigenous settlers and adapted into "modern" lacrosse, which was then imported to British Columbia, where it was embraced and "re-indigenized" by the Stó:lō peoples of the Fraser Valley. I examine not only how the version of lacrosse played by Indigenous peoples in British Columbia was a colonized version of what was originally a Haudenosaunee variation of the game in Northeastern North America, but also how this colonized version of lacrosse was incorporated and co-opted by Stó:lō communities for their own purposes. Stó:lō peoples used lacrosse as a vehicle for cross-community communication and relationship building, for fostering of pan-Indigenous identities, and supporting pride in their own identity and proficiency.

The journey of the Creator's Game from Eastern lands to Stó:lō hands tells a complex story of cultural colonialism as well as Indigenous resilience and cultural reclamation. Articles featuring Indigenous and non-Indigenous lacrosse matches from the Chilliwack Progress are used

to examine the complex and often contradictory nature of local settler-Indigenous relations in the late 19th and early 20th centuries.

Website Link:

cthompson.opened.ca/

Indigenous Research

Shelby Davis

Teacher Education

Faculty Supervisor: Nikki Yee

Award: \$1,000

Shelby: I am finishing my final semester at UFV with a Bachelor of Arts degree with a major in Geography. Soon after I will be applying to the teaching program in hopes to teach in an elementary school. Due to my family ties to Indigenous culture and respect for all it has to offer, I felt that this topic is extremely relevant. In the education curriculum there is a major push towards understanding and implementing Indigenous knowledge. This project allowed me to be apart of the research of displaying the importance of this perspective and ways of knowing.

How can Indigenous Storywork contribute to the learning and cognitive development of all students?

Storytelling is an ancient and continuing interactive art form that has been used in elementary schools across Canada since time immemorial. In this project, I drew connections between westernized story telling and Indigenous story work and how the regular usage of story work in classrooms can heavily influence the cognitive development and learning of students. Storytelling provides opportunities to express the experiences of Indigenous peoples in Indigenous languages and nurtures relationships and the sharing of Indigenous knowledges and cultures; it sustains communities and validates the experiences and epistemologies of Indigenous peoples.

Olivia Daniel

Anthropology

Faculty Supervisor: Nicola Mooney

Award: \$1,000

Olivia: I am a fourth-year history and anthropology student with a commitment to social justice which inspires me to research histories and narratives of oppression and to pursue and document hidden community histories. I have been fortunate to have several research opportunities at UFV, including being a student ambassador for UFV's Peace and Reconciliation Centre Collaboratorium where I worked with the Kwantlen First Nation to develop a digital archive. I have also been an RA in both the Anthropology and History departments and have conducted and presented publicly on several independent research projects. I intend to apply my training in history and anthropology to graduate work in ethnohistory.

A Visual Anthropological Approach to Analyzing Greenteacel's Representations of Womanhood and Femceldom

Public understandings of inceldom evoke moral panic while the popular media presents female involuntary celibates or femcels positively and through a feminist lens. My project focused on this paradox of representation, exploring it through a visual analysis of femcel and incel imagery and associated discursive commentary as apparent in the postmodern digital art created by femcel artist Greenteacel. I examined her drawings and their online audiences as sites of femcel meaning making as well as in relation to the incel male gaze. On the surface, it seems like femcels are creating safe online spaces to discuss their frustrations about toxic masculinity and relationships with men as well as to explore their own self-image. However, my analysis of Greenteacel's art demonstrates that femcels desire to be loved within monogamous heteronormative relationships; thus, they internalize the male gaze, romanticize traditional gender norms and the domestic sphere, and submit to the patriarchy.

Maegen Sargent

Art History

Faculty Supervisor: Heather Davis-Fisch

Award: \$1,000

Maegen: In September I will be attending Carleton University in Ottawa to begin my master's studies in art history, with an intent to teach at a post-secondary level once I've obtained my PhD. I chose Barkerville theatre as my topic because my great-grandfather, Charles Henry Hayton Sr., taught there between 1918 and 1919. It was through finding a photograph of him that I realized Barkerville was not actually a ghost town after the Cariboo gold rush had ended.

Cariboo Gold Rush Theatre: Barkerville's Ghost Town Status Examined

When Barkerville's newspaper, the Cariboo Sentinel, closed its doors on October 30, 1875, Barkerville mistakenly became known as a "ghost town." In actuality, gold mining life continued in this region well past the Cariboo gold rush era of the early 1860s up until it was declared a historic site in 1958. In assuming Barkerville was abandoned like many other boom towns of the nineteenth century, Barkerville's theatre and performance culture was also presumed nonexistent. How, then, do we approach and trace the theatre history of a site that has been actively forgotten? This project questions the definition of "theatre," and provides proof of entertainments in the late nineteenth and twentieth centuries that may be deemed performative, while suggesting a possible method of approaching the theatre history of boom towns exiled into ghost town status that may be used when analyzing other historic towns.

Avitasha Chand

Communications

Faculty Supervisor: David Thompson

Award: \$1,000

Avitasha: I am currently in my third year at UFV pursuing a degree in Psychology. Receiving an award for a research project surrounding mental health means a lot as it has been a focus on mine to raise awareness about it, alongside neurological disorders/mental illnesses. I am very thankful to David Thomson for giving me the space to explore a topic, such as epilepsy that is not discussed enough. I hope to continue my education in graduate school and utilize my platform to help make mental health resources more accessible.

Effective Treatment and Therapy Options to Combat Anxiety and Depression for People with Epilepsy

“Effective Treatment and Therapy Options to Combat Anxiety and Depression for People with Epilepsy” started off as a potential idea for this research project due to a personal journey with epilepsy. It is also a neurological disorder that is often not given the proper attention it deserves. In addition to that, anxiety and depression are not typically the first things people think about when it comes to epilepsy. However, it is a major part of it that needs to be talked about more. There is a high prevalence rate of anxiety and depression amid individuals with epilepsy.

The research report looked at a few different treatment options for anxiety and depression in people with epilepsy, and to see which are more effective. Regarding anxiety, Cognitive Behavioural Therapy (CBT) was found to not only decrease anxiety, but also the number of seizures. Oral medications on the other hand have been found to aid patients with generalized anxiety disorder and overall, a better treatment option for individuals with epilepsy. CBT has been found to be a more effective treatment option for individuals with epilepsy battling depression.

Daniela Castroparedes Herrera

Criminology & Criminal Justice

Faculty Supervisor: Hayli Miller

Award: \$1,000

Daniela: I am a UFV School of Criminology and Criminal Justice alumni student. In September, I will be attending the University of Victoria to begin my Juris Doctor studies. Through my honours studies and my work as a legal assistant, my drive to advocate for equity and equality continues to grow, which has fueled my aspiration to succeed in law school.

Considering the Best Interests of the Child Within the Impact of Race and Culture Assessments for African Canadian Offenders

Within my research, and under Dr. Millar's guidance, I analyzed how the Impact of Race and Cultural Assessments (IRCA) can be used to make decisions that prioritize the wellbeing of the defendant's children when making sentencing judgements for African and Caribbean Canadian criminal defendants. This topic allowed me to advocate for children who experience traumatic loss throughout the criminal justice system. Though my positionality as a Latina means I cannot fully understand the lived experiences of African and Caribbean Canadians, I can relate my own experiences of racism and parental loss to the circumstances in the case law I reviewed. Within my research, I found three primary findings. Firstly, during the criminal sentencing of a parental caretaker, there is an overall lack of recognition of the best interest of the child. Further, that the cultural and social networks of African and Caribbean Canadian children need to be safeguarded, and notably, the IRCA reports did not include ramifications a child may face if their parent is given a carceral sentence. A key finding is, that IRCA writers should be trained and have a responsibility to report on the rights of children, including the right to culture and identity, which for collectivist cultures includes acknowledging a child's social-cultural network.

Adena Penner

Economics

Faculty Supervisor: Michael Batu

Award: \$1,000

Adena: I am currently graduating from the University of the Fraser Valley with a Bachelor of Arts. I have been a dedicated student for many years and am excited to continue my education at SFU this coming fall. I am very grateful to my family, friends, and professors that have encouraged me to come thus far, as I would not be here without them.

Determinants of Salaries of First Nations Elected Chiefs in British Columbia

This study analyzes the First Nations elected Chiefs salaries in British Columbia and determines factors that influence their annual compensation. We used the First Nation profiles available on Indigenous and Northern Affairs Canada to measure the First Nations elected Chief's salary given the reserves dependency on government transfers and other possible socio-demographic characteristics. We also used Statistics Canada's 2016 Census data to determine whether the community's well-being impacted the elected Chief's salary. Beyond the regional characteristics, our results indicate that First Nations elected Chiefs salaries increase in two ways: as population increases and when the reserve becomes less dependent on government transfers. Finally, we discuss possible reasons why these two factors result in an increase in the elected Chief's salary and why future research on this subject should be explored.



If you are curious, you'll find the puzzles around you. If you are determined, you will solve them.

- Erno Rubik

Caroline Zenky

English

Faculty Supervisor: Prabhjot Parmar

Award: \$1,000

Caroline: I am studying to become a high school Humanities teacher after I graduate from UFV's Bachelor of Arts program and achieve certification. I am thankful to have written this specific term paper as it has enriched my knowledge of various diasporas throughout history.

Remedies for the Wounds of Supremacism

The term research paper, "Remedies for the Wounds of Supremacism", discusses the catastrophic effects of British Imperialism in regions like British East Africa and British India in two major literary works: Tariq Malik's *Nights of Kleptomania* and M.G. Vassanji's *The Book of Secrets*. The wounds of such violent racial supremacy have continued to be perpetuated throughout history, lasting to the present day in our globalized world. The paper suggests a remedy in the form of memory, as Malik's and Vassanji's narratives explore. Ultimately, it proposes that there is significant healing power within memories – whether it is holding fast to them or letting them be buried once and for all.

*even the hardest puzzles
have a solution*



Colby Stinson

History

Faculty Supervisor: Christopher Leach

Award: \$1,000

Colby: While podcasts, documentaries, and feature films may have brought me to the study of history, independent research has deepened my interest and fundamentally changed my relationship with the discipline of history. Researching this project allowed me the opportunity to see the interconnectivity always present when analyzing historical events. Wars, revolutions, disasters, and technological discoveries litter the pages of popular history, but it is the ways in which these great cataclysms affect the daily life of both individuals and systems that I find truly compelling. As an aspiring teacher of history and social studies, I look forward to drawing on these lessons learned through hours of scouring old newspapers to inspire students to apply their own critical lens to research and reading.

Grain for Bread, Grain for Beer: Temperance and First World War Legislation on Brewing and Consumption in the United Kingdom

This project spawned from a research roadblock on an entirely different subject. While digging through old newspapers for perspectives of Belgian refugees during the First World War, I came across a variety of articles dealing with issues of beer production and consumption. On my faculty supervisor's suggestion to look for the ordinary within the extraordinary, I found a wealth of information on an under researched secondary effect of the war: drinking habits.

In my discussion of beer production, changing legislation, and the temperance movement in the UK before, during, and after the war I aim to show the catalytic effect of war on societies. The war did not itself alter the relationship between the state, liquor producers, and liquor consumers, but it did accelerate and manipulate changes already in motion. Class politics, a burgeoning temperance movement, and the logistical realities of a wartime food economy all played a role in the changing what and how people consumed alcohol in the UK.

Thomas Wilson

Media and Communication Studies

Faculty Supervisor: Darren Blakeborough

Award: \$1,000

Thomas: Thomas is a third-year English student with a minor in Media & Communications and an interest in rhetoric, semiotics, identity, and pop culture. Upon successful completion of his BA, he will pursue an MA in the sphere of Media & Culture and eventually obtain a Ph.D. This project gave him the unique opportunity to blend his academic and personal interests to expand upon what he noticed as a common, albeit latent, thread that permeates much of the literature on *The Simpsons*.

Representing the Past and the Present: Consumption, Nostalgia, and *The Simpsons*

This paper looks at presentations of nostalgia in both cultural artifacts in *The Simpsons* and the show itself. Specifically, I examine the appearance of the Simpson family's television set and family heirlooms before turning to the series and its merchandise. Through semiotic analysis, it becomes clear that nostalgia is closely linked to postmodern parody, highlighting the differences between not only the past and present, but the perceptions of the individual in relation to other consumers. In this sense, nostalgia can subvert our understandings of cultural or political history and reify oppositional readings of the text. Above all, these findings suggest that media literacy is at the center of our ability to render invisible the many ways that consumption permeates Western capitalist society.

Ian Boese

Philosophy

Faculty Supervisor: Wayne Henry

Award: \$1,000

Ian: I am a 4th year philosophy major, hoping to continue on to law school, with a particular interest in Indigenous law. I became interested in modal logic after completing an introductory course in symbolic logic, thinking that more study in that area would prepare me for taking the LSAT. What I found is that considering modality is philosophy at its imaginative best, and that so many ostensibly tangential issues are tied up in the concept, making it rewarding to consider and study.

Ontological Conceptions of Possible Worlds

The project titled, “Ontological Conceptions of Possible Worlds,” concerns the ontological and epistemological foundations of a consistent philosophical theory of possible worlds. So-called ‘Possible Worlds’ theories are concerned with the nature of intentional discourse that occurs in natural languages and are taken to have great promise for understanding the semantics of meaningful discourse. There are currently a few distinct theories, while all problematic in some ways, that are most promising for making sense of possible worlds ontology. This project critically surveys these theories and (somewhat gently) favours a particular conception prominently articulated by Nicholas Rescher. In addition to the light shed on the meaningfulness of natural language, the theory holds great promise for illuminating the nature and power of imagination, arguably one of the most distinctive traits of human cognition. Thus, it also connects directly with the second and fourth of our Institutional ILOs.

Issues like this can seem daunting and esoteric – philosophy at its most self-indulgent. A goal for this project was that it would remain conceptually sophisticated while being comprehensible to an average (but curious) reader. With hope, the reader of the essay will find a user-friendly account that causes them to care, or at least not write-off as uselessly abstract, these issues. They may find it is actually philosophy at its imaginative best

Adam Magalhães

Political Science

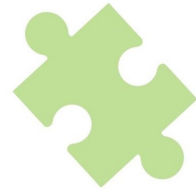
Faculty Supervisor: Edward Akuffo

Award: \$1,000

Adam: I am a third-year Political Science major with studies focused on geopolitics, political philosophy and security.

I can hardly tell what the future holds for me given how much of a non-linear path I have blazed so far: from being uninvolved at the university to answering the call of student governance and serving as a bridge between Political Science students and faculty. Next year, upon graduation, I will be looking at the invitation to a Christian order and doing a full overhaul of an engine and a car.

This research paper was a culmination of my disciplinary interests in geopolitics and security as much as it was the impact of videogames I played growing up that addressed the issue of mercenaries.



Guns for Hire: The Corporatization of Conflict - The growth of the mercenary phenomenon since the end of the Cold War and their threat to a Liberal world order

This paper examines the prevalence of mercenaries in world history, and how private military and security companies (PMSCs) used to operate under a legal vacuum—and how to some extent they still do.

Furthermore, it addresses the standing of the industry as it relates to international law and conventions such as the UN’s International Convention Against the Recruitment, Financing and Training of Mercenaries. More importantly, it discusses the incompatibility of an industry whose business model revolves around war profiteering and where profits come second to none with a liberal order that prioritizes peace and human rights. This conundrum is even more concerning considering the increasing role of Russian and Chinese private military companies around the world and how they operate under different rules.

Michelle Grafton

Psychology

Project Supervisor: Sven Van de Wetering

Award: \$1,000

Michelle: I am currently an undergraduate student at the University of the Fraser Valley, where I will graduate this spring with a BA in psychology and extended minor in sociology. During my time as a student, I have been fortunate enough to work as a research assistant for the Community Health and Social Innovation Hub (CHASI) at UFV, as well as conduct original research such as the directed studies project which is receiving this award. I hope to continue my work in social and psychological research and pursue a graduate degree in the near future.

Mind the (Empathy) Gap: Using moral reframing to increase empathy and change COVID-19 vaccination attitudes across the left-right political divide

Existing research demonstrates that people’s moral values tend to differ with their political orientation. Using a technique called moral reframing, this online study explores whether framing COVID-19 messaging using moral values which appeal to conservatives (loyalty) versus liberals (fairness) are effective in changing participants' COVID-19 vaccination attitudes and/or effective in increasing empathy towards people of differing vaccination statuses. Participants read morally reframed messages, then completed a survey measuring vaccination attitudes, empathy, and moral values. Results indicate that moral reframing caused higher pro-vaccination attitudes in conservatives, but not in liberals. Moral reframing was also successful in increasing empathy towards unvaccinated people in liberals, as well as empathy towards vaccinated people in conservatives. This study is the first to apply moral reframing to COVID-19 vaccination messaging and directly increasing empathy, and results may be used to increase efficacy of real-world vaccination messaging, as well as bridge the ‘empathy gap’ that often exists between people of differing political orientations.

Brooke Higginbottom

Sociology

Faculty Supervisor: Kathleen Rodgers

Award: \$1,000

Brooke: This semester was the end of my third year here at UFV. I am a sociology major, and my goal in studying sociology is to impact our understandings and constructions of everything to do with gender, sexuality, and sexual health. Moving forward, I hope to continue my education to achieve a Master's in Sociology. I plan on continuing my research into other lesser-known aspects of gender, sexuality, and sexual health.

“I don’t need to have sex to know that I don’t like it”: Asexual perspectives and experiences of romantic and sexual relationships

Over the past year, I realized that I am asexual. I wanted to incorporate this part of my identity into my studies, so, when given the opportunity, I decided to study the experiences of other asexuals. I realized that there were many gaps within the existing research about asexuality, so I took the opportunity to not only address those gaps, but to use my project as a way to educate others.

I found that the experiences of asexual people vary greatly from person to person, as the asexual spectrum goes beyond our basic understandings of sexuality. There is no way to capture every asexual experience within a single statement or paper. The sexual identities of asexual people actively deconstruct mainstream norms and ideas of relationships, romance, and sexual attraction. Many of the people in my study were aware of this and provided insightful comments on the construction of attraction.



Mia Davison

Theatre

Faculty Supervisor: Heather Davis-Fisch

Award: \$1,000

Mia: Mia Davison is a graduating student of the University of the Fraser Valley's theatre program. At the same time, she trained in a professional acrobatic program. She's excited to apply her learning and experience from both as she begins studying education.

"Performing Pain Under the Big Top" / "Just, Only, and Still Human"

"Performing Pain Under the Big Top" is a paper that compiled and discussed information suggesting and confirming the alarming prevalence of normalized pain in artistic, physical performance, and specifically in circus. I was able to anecdotally research through my own experiences in circus, as well as through theatre, physical therapy, and sociology sources. This paper helped me realize a darker side behind the bright big top.

*the solution
often turns out
to be more
beautiful than
the puzzle*

*- Richard
Dawkins*



Katrina Frankenberger

Kinesiology

Faculty Supervisor: Gillian Hatfield

Award: \$1,000

Katrina: I am extremely grateful to the School of Kinesiology at UFV for providing numerous opportunities to learn about research in a hands-on setting, all of which led me to gain the skills needed to complete this pilot project. After graduation, I plan to gain practical experience in the field working with various populations, before applying to graduate school to study clinical exercise physiology. In the long term, I hope to pursue post-secondary teaching as well as continuing to investigate how exercise can be used to improve the quality of life for people who suffer from chronic conditions, and work directly with those patients.

The Feasibility of an Online Progressive Resistance Training Program with Instability for Individuals with Parkinson’s Disease: A Pilot Study

This pilot study looked at the feasibility of an online exercise program for people with Parkinson’s Disease through a randomized control trial. Though Parkinson’s has no cure, there are a host of benefits to participating in regular physical activity. During COVID-19, face-to-face exercise classes were cancelled; therefore, we looked at whether the benefits of physical activity could be replicated in an online environment. The study found clinically significant changes when comparing control and intervention groups. These changes suggest that online programs could be beneficial, though more research needs to be conducted in this area. Outside of COVID-19, online classes could increase accessibility of care for people who live in rural areas, do not have access to transportation, or cannot afford in person classes.

Nicole Cusick

Nursing

Faculty Supervisor: Shelley Canning

Award: \$1,000

Nicole: I am a fourth-year Bachelor of Science in Nursing student passionate about Deaf-aware healthcare. In the future, I plan to pursue nurse practitioner training and provide Deaf-aware primary care services to D/deaf and hard of hearing patients, including services in American Sign Language. This study allowed me to develop research on an understudied population and begin a path to advocacy for D/deaf and hard of hearing patients.

Exploring D/deaf and hard of hearing people's experiences in the Canadian healthcare system

The purpose of this study was to identify the healthcare barriers experienced by D/deaf and hard of hearing people and to explore how healthcare professionals can provide Deaf-aware care. Poor communication, attitudes of healthcare providers, and the inaccessibility of services were themes that revealed a significant lack of Deaf-awareness in the Canadian healthcare system. A lack of access to sign language interpreters, especially in urgent situations, left participants feeling isolated from their health and medical care. One participant described how “there is a large difference between hearing that someone spoke and understanding what they said.” Experiences of poor communication compromise fundamental healthcare principles of patient safety, health literacy, and informed consent. Changes are needed to support the provision of a system that is accessible and Deaf-aware. Examples include ensuring streamlined and emergency access to interpreters, using clear face masks, and educating healthcare professionals on sign language and Deaf culture.

Addy Schnider, Trisha Kumar

Business

Faculty Supervisor: Kirsten Robertson

Award: \$500 each

Addy: As a Bachelor of Arts student with a double minor in business and communications and aspiring HR professional, Addy (she/her) is always looking for opportunities to get involved in the UFV community. This qualitative research project has allowed Addy to explore her interest in organizational behaviour and pursue her passion for lifelong learning.

Trisha: I am a fourth-year student working towards a Bachelor of Business Administration Honors degree in finance. After completing my undergraduate degree, I intend to pursue a Master of Science in Finance degree. This project has allowed me to develop the skills necessary to succeed in a rigorous, research-oriented graduate program. I am excited to continue to grow my research aptitude at UFV and in the future.

Stop for Squirrels, Speed up for my Manager: An Exploration of Supervisor-Perpetrated Mistreatment in Front-Line Service Work

We explored the experience of direct (i.e., being mistreated oneself) and third-party (i.e., observing co-worker mistreatment) supervisor mistreatment in the service industry. Through in-depth interviews with 35 service industry workers, we developed a framework of responses consisting of four categories: emotional reactions (e.g., feeling frustrated), prosocial responses (e.g., constructive intervention), antisocial responses (e.g., conflict avoidance), and relationship outcomes (e.g., bonding among employees). Within these four categories, we identified contrasting responses between experienced and observed mistreatment. We outlined the implications of our research for the mistreatment literature and service organizations.

Chanzo Muema

Computer Information Systems

Faculty Supervisor: Amir Shabani

Award: \$1,000

Chanzo: I recently graduated from UFV’s Bachelor of Science program, majoring in Computer Science. During my final year, I began research with the Interactive Intelligent Systems and Computing research group under the supervision of Dr. Amir Shabani. Engaging with the research group has greatly assisted with my securing multiple related career opportunities in software engineering. I intend to continue the research we began and eventually pursue a master’s degree in Computer Science with a focus on affective computing.



Social Embodiment of Companion Robots in Smart Spaces: IoRT for Independent Living

Our system introduces a human-centered Artificial Intelligence (AI) approach to support independent living by providing immersive interactions between humans, robots, and their environments. We aim to have a socially intelligent robot equipped with personalized machine learning (ML) capability that can assist with daily human activities and improve the quality of life for individuals (e.g. dementia patients). We used AI and ML to aid in smart space control, and to improve emotion and mood through affective computing.

To make it scalable, we developed a method to remotely control these social companion robots (SCR) using an augmented reality (AR) interface. Furthermore, we developed a means to use a SCR to carry an audio conversation and one-way video feed with a centralized controller wearing an AR headset. To improve the mood of the individual, we integrated Google Assistant so that the SCR can interact with a smart environment (toggle lights, temperature, music, etc.).

Heather Kelly

Biology

Faculty Supervisor: Justin Lee

Award: \$1,000

Heather: This past semester I completed my Bachelor of Science degree with a major in Biology. Throughout my degree I had the incredible opportunity to be involved in research, which allowed me to gain vital skills for both my academic and professional future. I chose to conduct my research on the use of lipid nanoparticles in aquaculture due to the therapeutic use of LNPs and their multiple applications. In the future, I hope to continue my education by working towards my goal of becoming a family doctor.

The Investigation of LNP-siRNA Formulations for Rainbow Trout Fish Cell Lines Through the Examination of Cellular Uptake and Reporter Gene Knockdown In Vitro

LNP-mRNAs have gained extreme popularity in the last year as they are the major component of the Pfizer (Comirnaty) and Moderna (Spikevax) COVID-19 vaccines. Our project aims at transitioning this technology to benefit fish health, with the end goal of creating a new branch of aquaculture therapeutics. Encapsulating siRNA into LNPs can potentially be utilized to treat RNA fish viruses, including viral hemorrhagic septicemia virus (VHSV). We have been testing LNP-siRNA systems in a variety of fish cell lines in vitro to examine cellular uptake, gene silencing, and cytotoxicity. We also wanted to determine if this delivery platform is suitable for aquaculture. Results indicate that LNP-siRNAs are successfully taken up by the tested fish cell lines and that there are no significant cytotoxic effects. Future research will investigate the use of LNP-siRNA to knockdown a series of viral genes necessary for the replication and survival of fish viruses. This has the potential to benefit fish health and improve the aquaculture industry.

Bach Nguyen

Chemistry

Faculty Supervisor: Linus Chiang

Award: \$1,000

Bach: My name is Bach Nguyen, and I am currently studying at Simon Fraser University to pursue my Master's degree with Prof. Warren. I graduated from UFV last Fall with a Bachelor of Science in Chemistry. Research at UFV with Prof. Linus Chiang has developed my interest in working with the application of inorganic to catalyst design. During my time at UFV, the research prepared me to work well in my graduate studies as it shares many similarities. My research at UFV focused on designing new copper complexes to be used for CO₂ reduction. The project gives me a chance to create a catalyst from the beginning (literature research, lab work experience, problem-solving).

Investigating novel monometallic

Bis-amidoanilino metal complexes as small molecule activation catalyst

Functional groups that coordinate the metal center of an inorganic compound can greatly influence its electrochemical behaviour or the potential at which an oxidation or reduction reaction will occur. A widely studied class tetradentate ligand is the salen ligand, which is popular due to its ease of synthesis, allowing for a near-endless permutation of different complexes to be investigated, from varying its bridging unit, phenolate substitution, or metal ion. My project focus on creating a related class of tetradentate ligands, where two aniline functional groups are linked by a diamide bridge to yield a bis-amidoaniline ligand. It can be used for different metalation reactions and will be explored using optical and electrochemical methods established in the Chiang research group. I successfully made the target ligand for my project, which can be further studied and developed as a catalyst for CO₂ reduction by my lab-mate at UFV.

Jennifer Heldt

Environmental Studies

Faculty Supervisors: Steven Marsh

Award: \$1,000

Jennifer: I am currently an undergraduate student at the University of the Fraser Valley, where I will be graduating this summer in the Environmental Studies (Natural Science) program. I have greatly enjoyed my education at UFV thanks to the amazing instructors and students that helped me along the way. I decided to pursue this project due to my passion for research and conserving the environment.

The Impact of Urbanization on the Water Quality Within Stoney Creek, Abbotsford, BC: A deeper look into the correlation in temperature and dissolved oxygen

We are all aware of the current impacts our Earth is facing with anthropogenic activities, but how much do we know about the impacts happening in our own backyards. This project allowed me to further my research by sampling the water in our local creeks. Stoney Creek is the main focus of this project which runs through residential areas in Clayburn. This leaves the water at risk of pollution and becoming contaminated. Due to this, it is extremely important to continuously keep up to date on the water quality of these watercourses. Water quality parameters (temperature, dissolved

oxygen, specific conductivity, turbidity, ORP, and pH) data were collected from 2015 to 2022. This project focuses on dissolved oxygen and temperature and how they alter over the years. This project brings awareness to our vulnerable resources that need to be monitored.



Lauren Rae Peterson

Teacher Education

Faculty Supervisor: Nikki Yee

Award: \$1,000

Lauren Rae: I am an adult student returning to university after 15 years with the goal of completing a bachelor's degree in Integrated Studies focusing on English, education, and international studies, to eventually teach English overseas. Engaging in this research project helped me to consider and learn more about student experiences, open up about my own personal growth, and hopefully bring attention to an important yet severely under-researched subject.

How do Canadian LGBTQIA+ Students Experience School?

I wanted to explore how Canadian LGBTQIA2S+ youth experience school and how K-12 SOGI programs could help, however I had a very hard time finding relevant research on the subject. Presenting my project like a classic storybook, I told a story based on my own experiences about how "Ivy", a non-heteronormative person, experienced childhood, education, and adulthood. I then connected BC and Canadian student survey results with plot points in the story, in an effort to help the reader connect with and understand the research data on a deep and empathetic level.

There is a disturbingly large disparity between how well the average student rated their mental health in comparison to trans and non-binary youth, as well as how much more often trans, non-binary, and non-heterosexual youth experienced bullying and discrimination. In fact, 36% of Canadian trans and non-binary youth aged 14-25 reported feeling UNSAFE at school in 2019, which is completely unacceptable. I hope to see more robust research on the subject in Canada soon, particularly how school SOGI programs could be improved.

Sara Hoffman

Social Work and Human Services

Faculty Supervisor: Brianna Strumm

Award: \$1,000

Sara: Sara graduates this year with a Bachelor of Social Work degree. Her supervisors note: “Sara’s contributions have exceeded the Research Assistant job description, as she participated in editorial meetings with our Oxford University Press editors, and provided, from the lens of an upper level BSW student, a valuable review of content that has helped shape our vision of the book.

“Sara’s work has been highly valuable and, additionally, she is reliable, punctual, responsive, professional, and manages her time extremely well. We wish her all the best in her future endeavors and are sad to see her go!”

Transformative community development in the 21st century: A Canadian guide

Transformative Community Development in the 21st Century will be an indispensable resource for Canadian postsecondary students interested in a comprehensive, up-to-date, practical textbook on community development. It will provide an overview of community development theory, history, and ethics as well as a practical guide to developing skills and strategies essential for engaging diverse communities in transformative community development initiatives.

Sara’s duties included reading drafts of completed chapters to provide a student perspective on content and offering suggestions to make chapters more student-friendly; noting what was confusing or unclear; making suggestions for improving the clarity of the writing; identifying important curriculum that has been left out or underemphasized; and locating additional material that would enhance student understanding of the chapter topic.

Sara has also tracked down sources for chapter content, such as articles, books, and reports, and researched possible case studies that feature successful community development initiatives.

BC Graduate Scholarships

Ministry of Advanced Education, Skills, and Training \$15,000

The Ministry has awarded funding to provide competitive, merit-based graduate student scholarships. These scholarships enable British Columbia institutions to attract and retain the best and brightest graduate students and increase their ability to compete for students who are leaders in their field.

UFV is delighted to receive \$90,000 from the Ministry, which will provide six \$15,000 BCGS awards over the next two years.

We are honoured to award the BC Graduate Scholarships to these two new Master of Social Work students:

Rebecca Edwards

Master of Social Work program

Joshua Miller

Master of Social Work program

*willingness to be puzzled is a valuable
trait to cultivate, from childhood to
advanced inquiry*

- Noam Chomsky



UFV gratefully acknowledges the contribution from the BC Ministry of Advanced Education, Skills and Training, as well as private donors, for funding the BC Graduate Studies Scholarships.

Graduate Scholarships

UFV undergraduate students receive numerous prestigious awards for their graduate studies from national and international granting agencies and organizations. This year we have confirmation of the following:

Nyki Kish-Field – (UVIC) \$17,500

Faculty Researcher: Michael Corman

Social Sciences and Humanities (SSHRC)

Olena Bogdanov – (Cornell) \$70,000 USD

Faculty Researcher: Jon Thomas

Cornell’s Dual Master’s program in Urban Technology



Innovation is like looking for pieces in a jigsaw puzzle. You have to find a lot of pieces that don't match to find the one or two pieces that match.

- Edward Conrad

NSERC Undergraduate Student Research Awards (USRA)

\$6,000 Awards

These national awards are meant to stimulate interest in research in the natural sciences and engineering. They allow students to gain valuable research experience that complements their studies by working full time for a term with a nationally recognized UFV faculty researcher.

Additional funds are provided by the faculty researcher's grant.

Ziana Kambere, Computer Information Systems

Faculty Researcher: Gabriel Murray

Heather Kelly, Biology

Faculty Researcher: Justin Lee

Ryan Goldbach, Biology

Faculty Researcher: Lucy Lee

Connor Frey, Chemistry

Faculty Researcher: Golfam Ghafourifar

Rachel Sailer, Chemistry

Faculty Researcher: Linus Chiang

Vanessa Brewer, Geography

Faculty Researcher: Olav Lian

UFV gratefully acknowledges the support of the Tri-Council Granting Agencies (SSHRC, NSERC & CIHR) through their Research Support Fund and financial contributions to the UFV Research Office.

Student Presentation Grants

Adventure – another piece of the puzzle!

In addition to the awards mentioned here, the Research, Engagement, & Graduate Studies office provides travel grants to students presenting their research at professional conferences. In 2021-22, 15 students were provided up to \$1,500 each to present at conferences online and across Canada, throughout the USA, and internationally in places like the UK.

Our amazing students are often the only undergraduates presenting at the conference, and they get to connect with leading researchers in their field of study. They report that the experience was life changing and the highlight of their time at UFV, adding real world experiences to their education puzzle.

There are no extra pieces in the universe. Everyone is here because he or she has a place to fill, and every piece must fit itself into the big jigsaw puzzle.

- Deepak Chopra



UFV Student Research Day Awards

Each year UFV Research Services invites undergraduate student researchers to showcase their work by participating in a fast-paced 2-minute Micro-Lecture, a poster presentation, or both. More than 80 students connected at this lively interactive event and competed for eleven scholarship awards of \$200.

Engagement in research and events such as this can help students obtain scholarships, awards, and graduate school positions. It also contributes to UFV's strategic imperatives including "Provide opportunities for students to participate in experiential learning and/or research and scholarly activities with faculty members."

Heather Kelly - Biology

Award: President's

The Investigation of LNP-siRNA Formulations for Rainbow Trout Fish Cell Lines Through the Examination of Cellular Uptake and Reporter Gene Knockdown in Vitro

Faculty Supervisors: Lucy Lee, Justin Lee

Curtis Plug – Chemistry

Award: Provost & Vice-President Academic

*Investigations into the pharmacological impact of mono- or dimethoxy substitutions on chalcones in the model organism *Caenorhabditis elegans**

Faculty Supervisor: Nathan Bialas

Jordan McEvoy - Psychology

Award: Vice-President, Students

A More Generalizable Application of Social Norms and Its Effect on the Trustworthy Bias

Faculty Supervisor: Shawn Geniole

Jose Toffoli – Physics & Mechatronics

Award: Vice-Provost & Associate VP Academic

Monte Carlo Simulation for High Energy Photons in Radiotherapy Dosimetry

Faculty Supervisor: Derek Harnett

Jennifer Heldt – Environmental Studies

Award: Associate VP Research, Engagement & Graduate Studies

The Impact of Urbanization on Water Quality in Stoney Creek, Abbotsford, BC: The Correlation in Temperature and Dissolved Oxygen

Faculty Supervisor: Steven Marsh

Lisa Horton – Environmental Studies

Award: Associate VP Research, Engagement & Graduate Studies

Utilizing GIS to bridge the gap between vertical farming and local consumers

Faculty Supervisors: Rob Newell, Stephania Pizzirani, Addisalem Benyam

Samantha Motola - Psychology

Award: Dean, College of Arts – Social Sciences

How psychologists talk about psychological knowledge and research in podcasts: A discourse analysis

Faculty Supervisor: Donna Tafreshi

Katrina Frankenberger - Kinesiology

Award: Dean, Faculty of Health Sciences

The Feasibility of an Online Progressive Resistance Training Program with Instability for Individuals with Parkinson's Disease: A Pilot Study

Faculty Supervisors: Gillian Hatfield

Daylan Pritchard - Biology

Award: Dean, Faculty of Science

Applying Image Analysis Tools for Rapid Processing of in Vitro Rainbow Trout Cell Migration Data

Faculty Supervisor: Lucy Lee

Nicole Cusick - Nursing

Award: Dean, Faculty of Professional Studies

Exploring the experiences of D/deaf and hard of hearing people in the Canadian healthcare system

Faculty Supervisor: Shelley Canning

Leah Hamm - Agriculture

Award: Dean, Faculty of Applied & Technical Studies

Thrips monitoring in leeks: Preliminary Observations from the 2021 and 2022 field season

Faculty Supervisor: Renee Prasad

Visit ufv.ca/research/events/ to see photos of Student Research Day and videos of the student MicroLectures including our two student speakers!



THANK YOU!

Our students could not piece together their studies, work, and life without the unwavering support of family and friends. Like the pieces of a puzzle, your contribution to their goals links these important facets together and helps them build something amazing!

Special thanks to our incredible faculty and staff who are dedicated to mentoring our students, guiding them in arranging the pieces of their education experiences in a unique and relevant way to elevate their aspirations.

 *when our students succeed, we all succeed!* 

LASTLY...a huge thank you to the **Clarion Hotel** for providing us with an amazing facility, great service, and an outstanding buffet for this event since 2004!

