

Contents

| | |
|---|----|
| Food and Agriculture Institute (FAI) | 1 |
| South Asian Studies Institute (SASI) | 10 |
| Centre for Education and Research on Aging (CERA) | 16 |
| Centre for Global Development (CGD) | 21 |
| Centre for High Pressure Research (CHPR) | 25 |
| Centre for Philosophy for Children (CP4C) | 27 |
| Centre for Public Safety and Criminal Justice Research (CCJR) | 29 |
| Community Health and Social Innovation Hub (CHASI) | 32 |
| Esposito Family Centre for Innovation and Entrepreneurship (EFCIE) | 36 |
| Peace and Reconciliation Centre (PARC) | 39 |
| Luminescence Dating Lab (LDL) | 48 |
| Molecular Modeling Lab (MML) | 52 |

Students

- Olena Bogdanov (Smart City Project)
- Jasleen Kaur Sandhu (Wildfire Response Project)
- Abdul Aziz Abdul Ghafoor (Clinician entrepreneurship)
- Varshaa Kashyap (Veterinary Industry Study, Cultural Entrepreneurship Project)
- Michaela Jacob (Veterinary Industry Study)
- Michaela Warmerdam (Cultural Entrepreneurship Project)

Community Engagement

- Invited Talk (July 2021) – “Introduction to Business Models” by Dr. Jon Thomas. Organized by the Nanomedicines Innovation Network (NMIN), UBC. NMIN is a National Centre of Excellence (NCE) focused on the nanomedicine sector in Canada
- Invited Talk (September 2021) – “Design Thinking” by Dr. Jon Thomas. Organized by Community Futures South Fraser, Chilliwack, BC [Virtual Event]
- Invited Panel Member (October 2021) – “Sustainable agriculture & Leadership: The Fraser Valley as a center for food production and innovation today and into the Future” (Dr. Jon Thomas), Organized by the UFV School of Business for students at the University of Applied Sciences and Arts (Lucerne, Switzerland) [Virtual Event]
- Invited Talk (October 2021) – “Meaningfulness of Work” by EFCIE Faculty Associate Dr. Kirsten Robertson, EFCIE and Community Futures South Fraser partnership [Virtual Event]
- Invited Talk (October 2021) – “Design Thinking for Entrepreneurs” by Dr. Jon Thomas, Organized by the Chilliwack Creative Commission (Chilliwack Economic Partners Corporation) [online live stream]
- EFCIE Talk (February 2022) - "How established agricultural firms strategically renew their technology portfolios through Artificial Intelligence", Speaker: Dr. Michael Wustmans - Research Associate, Chair of Technology, Innovation Management, and Entrepreneurship, University of Bonn, Germany, Organizer and Host: Dr. Jon Thomas
- Invited Talk (March 2022) – "The work of the Esposito Family Centre for Innovation & Entrepreneurship" by Dr. Jon Thomas, at the Mission Rotary Club
- EFCIE Talk (March 2022) - "An alternative business model for social innovation in the Fraser Valley", Speaker: Prof. Chris Schinckus, Dean, Faculty of Professional Studies, Organizer & Host: Dr. Jon Thomas
- Invited Talk (March 2022) – The Esposito Family Centre for Innovation & Entrepreneurship by Dr. Jon Thomas, IYOQTHET PESP Virtual Conference 2022
- EFCIE Talk (April 2022) - "The Commercialization Journey of a Fraser Valley Tech-Entrepreneur", Speaker: David Leger, President & CEO H2 Portable Power Corp., Founder & CEO, Loop Energy Inc. (2000-2016), Organizer & Host: Dr. Jon Thomas

Publications, Presentations and Reports

Corman, M.K. (2021). Using Composites to Craft Institutional Ethnographic Accounts. In: Luken, P.C., Vaughan, S. (eds) *The Palgrave Handbook of Institutional Ethnography*. Palgrave Macmillan, Cham. [Peer-reviewed academic book chapter]

Hannah, D.R. and Robertson, K., (2021), "It's not all Puppies and Sunshine": Veterinary Workers' Emotional Comfort Zones and Companion Animal Euthanasia. *AMD*, 7, 130–154. [Peer-reviewed academic journal publication]

Hatfield, G.L., Costello, K.E., Astephen Wilson, J.L., Stanish, W.D. and Hubley-Kozey, C.L. (2021), Baseline Gait Muscle Activation Patterns Differ for Osteoarthritis Patients Who Undergo Total Knee Arthroplasty Five to Eight Years Later from Those Who Do Not. *Arthritis Care Res*, 73: 549-558. [Peer-reviewed academic journal publication]

Park, A., Goudarzi, A., Yaghmaie, P., Thomas, V. J., Maine, E. (2022) Rapid response through the entrepreneurial capabilities of academic scientists. *Nature Nanotechnology*. Impact Factor (2020): 42.237. [Peer-reviewed academic journal publication]

Plans for the Upcoming Year

Several discussions related to innovation & entrepreneurship events and activities are ongoing The centre will be adding a postdoctoral fellow in the coming year.

Peace and Reconciliation Centre (PARC)

Keith Carlson, Director

May 2021 – April 2022

<https://www.ufv.ca/peace-and-reconciliation/>

Purpose

The University of the Fraser Valley's (UFV) Peace and Reconciliation Centre (PARC) works from the individual, to the regional, to the global, to engage in interdisciplinary research and transformative action that focuses on enlarging our understanding of the roots of conflict, developing creative approaches to reconciliation, and promoting engagement aimed at transforming conflict into peace; building capacity and sustainability where injustice and tension have resulted in harm and marginalization. Our mission is to "envision and facilitate constructive and innovative processes that promote healthy relationships, transform conflict, and build just communities." Our strategic goals are to a/ Create a safe and supporting space for peacebuilding and facilitating interpersonal and group process for reconciliation locally and beyond; b/ Coordinate among existing services in the community to create civil society and citizen engagement; d/Provide programs, services and resources that contribute to building community, healthy relationships and transform conflict.

Membership

Over the past year PARC has grown its Communities of Practice as led by the Centre's team of Commitment Leaders:

- Director Keith Thor Carlson, for a community of practice focusing on Indigenous-Settler Reconciliation
- Professor Steven Schroeder, for a Community of Practice focusing on Trauma Healing and Harm Reduction
- Professor Amanda McCormick, for a Community of Practice focusing on Domestic Violence Reduction
- Professor Lolehawk (Laura Buker), for a Community of Practice that focusing on Indigenous Ecological Justice and Land-based Learning
- Professor Geetanjali Gil, for a Community of Practice focusing on the International Refugee Crisis and Experience

PARC has additionally invited additional individuals from outside of Abbotsford to join our Steering Committee.

In the fall of 2021, Grand Chief Clarence Pennier was elected as PARC's Steering Committee's Community Co-Chair.

Partnerships

- Sto:lo Tribal Council; Sto:lo Research and Resource Management Centre: a collaborative community-engaged scholarship (CES) research and consultation project that involves UFV student researchers to develop a comprehensive Allyship and Reconciliation Program for the Fraser Valley region that will include a credentialing component. Prof. Keith Carlson is coordinator of this initiative.
- Abbotsford Police Department: Connection Circle: PARC co-created with the Abby PD a new community Indigenization and EDI committee called "Connection Circle: Re-imagining Community"

to facilitate a process whereby positive relationships between police and community can be formed. PARC Direct Prof. Keith Carlson is the Chair of this committee.

- Sto:lo Research and Resource Management Centre / (Saanich) WSÁNEĆ First Nation / University of Victoria: a SSHRC Insight Grant (Prof. Carlson is PI, Prof. John Lutz from UVic is co-PI) examining the history of, and historical consciousness relating to, smallpox on the Pacific Northwest.
- Abbotsford News - This partnership has seen the newspaper provided PARC with media sponsorship that includes in-kind advertising and media coverage for a three-part series on domestic violence.
- UFV School of Criminology and Criminal Justice, UFV School of Nursing, Abbotsford Community Services and Abbotsford Crown Counsel - Both ongoing partnerships are related to community outreach initiatives PARC leads on Domestic Violence awareness
- Advocates for Change Living Learning Program: PARC is a partner with this student-led and designed initiative to give undergrad students an opportunity to live together in housing and partake in extracurricular activities that incorporate common interest, passions and goals of the group.

Students

UFV PARC Collaboratorium Student Summer Research Internship Projects, 2021

Reach Gallery – Voices of the Valley

Maaria Zafar worked this summer alongside the Reach Gallery's Curator of Historical Collections to build upon research and community-engaged processes already underway. Maaria contributed to ongoing research to identify local communities and histories that have been minimized, misrepresented, or altogether left out of public record. She also researched how waves of immigration to the Fraser Valley have led to patterns of displacement, opportunity, tension, and complementarity. Maaria employed a variety of research strategies to look through the museum's holdings as well as other local sources in order to gather these histories and begin to piece them together. Skills acquired and applied include database management, report writing, critical thinking and analytical skills, organization of materials, and communication with community members.

Kwantlen First Nation Digital Archive

Olivia Daniel spent time this summer working for the Kwantlen First Nation in creating a digital archive of community materials found in the existing archive, as well as through digital archives across British Columbia. Olivia scanned, indexed, and organized this information into a database, making it more accessible for the Kwantlen First Nation and its membership. Olivia was able to gain experience in searching for, locating, and documenting relevant archival materials, website creation, database creation, and synthesizing complex information.

Allyship and Reconciliation-Building

Brooke Higginbottom and Paul Jakhu worked together to locate existing allyship programs in the region offered by non-profit organizations and government/ministry entities. Brooke and Paul participated in several of these programs in order to assess their quality, identify gaps, and co-develop programs with the Stó:lō communities and UFV faculty programs and initiatives to fill those gaps. In addition, these students conducted 23 interviews with allyship program coordinators, and Stó:lō community members to obtain a better understanding of allyship in the region. Brooke and Paul concluded this research

project with research proficiency, interview experience, information management skills, and community outreach experience.

Research Assistant at Heritage Abbotsford

Kelsey Fleming worked with Heritage Abbotsford to research the history of labour movements in the Fraser Valley, with a focus on indigenous workers on hop and tobacco farms in the 19th and early 20th centuries. Kelsey compiled research pertaining to Hudson's Bay trading trends, Indigenous wages at HBC forts and other colonial enterprises, and how settler actions and laws impacted traditional Indigenous farming methods. Kelsey gained key skills in evaluating research material, organizing her findings, and understanding historical narratives and their longstanding impacts. A link to her completed project can be found here: <https://d.docs.live.net/46fc2b60e279e32b/Documents/Indigenous%20Labour.pptx>

Virtual Assistant at Heritage Abbotsford

Chandler Farlin worked with Heritage Abbotsford to convert existing interpretive material into Heritage Abbotsford's mobile and web-based apps, focusing on the Heritage History Garden. This garden documents traditional plants and their uses for food, medicine, and other uses by Indigenous and Metis people. Chandler worked to convert existing research and conduct new research on plants and their uses into two apps. One of these apps was directed at adults, while the other at children. Chandler was able to strengthen his skills in research, database management, and app development.

Fraser Valley Health Region Literature Reviews

Catana Tommy conducted literature reviews for the BC SUPPORT Unit Fraser Centre, a partnership between Fraser Health and Simon Fraser University funded by CIHR SPOR, in order to help the staff at the Fraser Centre become more informed, sensitive, and aware of Indigenous peoples' perspectives on health research, and assist them in understanding how best to develop partnerships with local indigenous communities to support patient-oriented research and better health outcomes for this population. Through literature reviews, Catana was able to further develop research, critical thinking and reading skills, organize findings, and identify key trends in the scholarship.

Smallpox Research for Professors Keith Carlson, John Lutz, and the Stó:lō Research and Resource Management Centre (SRRMC)

Jackie Drummond, Holly Janzen, Michaela Sapielak, and Maaria Zafar worked alongside Dr. Keith Carlson and Dr. John Lutz and their Indigenous partners at the SRRMC to further research the smallpox epidemics of the region, specifically focusing on the impacts the disease had, and still has, upon Indigenous people and their ways of life. These students gathered secondary source materials and began systematically looking through them for references to the smallpox epidemics. These notations were then uploaded into a database for future use. All four of these students gained skills in research practices, database management, critical thinking and reading skills, as well as identifying key trends and biases in historical materials.

Community Engagement

Steven Schroeder:

- Hosting the Peace Talk: "PACS Students: Peacebuilding Projects in the Fraser Valley"
- Peace Talk: "Dealing with Modern China" with keynote speaker, Guy Saint-Jacques, Former Canadian Ambassador to China, 2012-2016

Lolehawk:

- A Day Retreat – September 2021 - at the Blue Heron Reserve (diverse community) of youth, Indigenous knowledge keepers, Elders, Artists, Activists, to gather for climate action – community gathered to plant a cedar tree (and it survived the November flooding).
- Hope for the Planet – November 2021 (a UFV event supported by PARC - brought forward by UFV colleague Dr Melissa Walters & myself). It was well attended with many students, UFV Faculty, Fraser Valley community, and guests included BCIT Fish Scientist Dr Marvin Roseneau, a short play by UFV Drama Students, and Stó:lō singers, The Good Medicine Songs Performers, invited the audience to sing along to the songs in both English and Halq'emeylem about our Wild Salmon, Mother Mountain, Mt Cheam, the Great Cedar Trees, and the River. This event was informative and generated a great deal of conversation towards climate action.
- November 2021 – Feb 2022 Prestige award for Siyamiateliot Elizabeth Phillips – Coordinating the nomination, lead for the Inspire film crew, connecting Cheam community members for the film weekend event. Dr. Siyamiateliot Elizabeth Phillips is a national treasure and has “lifted up,” language learners throughout the lands. She has championed Halq'emeylem, our river language and this is bringing a reconciliation towards the revitalization of our endangered Indigenous language.
- December 2021 - • Panelist for National Day of Remembrance: Selected as one of the speakers for Dec 6, 2021: National Day of Remembrance and Action on Violence Against Women. It was a humbling experience to be asked to speak for this UFV streaming event.
- April 20, 2022, a UFV Roundtable event: Seven Generations to Come - Building Relationships for Climate Action, hosted by UFV's Indigenous Studies Program and the new School of Social Justice and Global Stewardship (SoJust), in partnership with the Fraser Valley Chapter of the Canadian Federation of University Women and supported by PARC. Our present aim is to develop a network of engaged faculty and community partners into which we can bring students and members of the community together for climate actions.
- A UFV Event – Sept 29, 2022, at the Gathering Place, Chilliwack Campus. Chowiyes/Xwithet! – Rise up/Wake up! This will be a large community gathering held the day before Truth and Reconciliation Day 2022. The program is in remembrance of all Indigenous children who went to Residential Schools. The organization of this event is well underway this Spring with funding in place – the involvement of UFV students, Halq'emeylem learners, Elders, Indigenous Knowledge Keepers, and friends and allies will make this gathering very special and significant in bringing forward an understanding of Indigenous history, culture, and resilience.
- Summer 2022 – Fall 2022 – Supporting a research project by UFV student Calista Thirsk. She will be creating a short documentary on the “importance of learning Halq'emeylem.” The narrative will take the viewer to the lands, river, and mountains that surround Stó:lō territory and give voice to an old story of the land, and how the language describes the reciprocity of “taking care of the land and all that is here.”
- Three Interviews – Podcasts 2022-2023: Interview One: (October) Bringing Together two or three participants from the April Roundtable – 7 Generations to Come. What climate actions and reflections have continued to inform them since that gathering? Is there hope for our planet and if so, what examples/stories are needing to be shared? Interview Two: (December) Wisdom of the Elders: An interview with Siyamiateliot and her daughter Vivian Williams. The importance of language and what steps are still to be taken for revitalizing our Halq'emeylem language? How does “bringing our language back,” contribute to a harmony and a reconciliation for our society?

Keith Carlson:

- “Topics in Sto:lo History” Series of three presentations to grade 11 and 12 students and teachers in the Fraser Cascade School District, June 2, 9, 2021.
- “Chinese People in Sto:lo History,” Keynote address to Chinese Association of Vancouver, January 18, 2021.
- “Settlers and Indigenous People, Both Here to Stay,” Presentation to Abbotsford School District Board of Trustees, May 12, 2021.
- “Indigenous History and the Project of Building Reconciliation,” Reach Gallery C3 Forum, Feb 23, 2021.
- “The History of BC Colonial-era Indian Reserve Creation and Reduction relating to the Squiala Community,” Presentation to Squiala First Nation Chief and Council May 5, 2021
- “Settler Colonialism and the Eclipsing of Stó:lō Women’s Perspectives on Territoriality,” BC Studies Conference, May 6-8, 2021.
- “Strategies for Integrating Peace-Building and Reconciliation Building into BC University Curriculum and Pedagogy,” Organizer and Chair of Round Table Session, BC Studies Conference, May 6-8, 2021.
- “The Future of BC’s Past,” Organizer and Chair of Conference Capstone Forum, BC Studies Conference, May 6-8, 2021.
- Peace Talks: “Indigenous Place Names and Hiking in the Fraser Valley – How do we engage in ethical recreation?” (Chair and Facilitator), July 13, 2021.
- Peace Talks: “Islamophobia: Seeking Solutions for Hate,” (Chair and Facilitator), June 23, 2021.
- Peace Talks: “The Kidnapping of Sto:lo Children - The Exploitation of Indigenous Children and their Labour in the Era Prior to Formal Settler Colonialism,” June 9, 2021.
- Peace Talks: “The Crown as an Agent of Reconciliation? The Promise of the Crown in Indigenous-Settler Relations,” April 14, 2021.
- “The Colonization of Coast Salish Families and the Rise of Inter-community Conflicts,” Strengthening the Circle: Fraser Health Region Indigenous Health Research Conference, June 3-4, 2021.

Geetanjali Gill:

- Chaired monthly CoP on Refugee Crises and Experiences. Members include 15 UFV faculty and staff; 15 UFV students (including members of UFV WUSC Committee); and staff from Archway Community Services, ISSofBC, Oikodome Foundation, PARC Steering Committee, Inasmuch, and community activists.

Amanda McCormick:

- Identified a case study to analyze and use to develop training protocols for better practices in identifying and supporting survivors of intimate partner violence who have sustained a brain injury
 - o The case study is discussed in this news article - <https://www.cbc.ca/news/canada/british-columbia/civil-lawsuit-criminal-case-intimate-partner-violence-1.6325951>
- Developed and submitted a Stage 1 Partnership Grant Application to the Social Sciences and Humanities Research Council to support applied research relating to survivors of intimate partner violence
 - o the studies we proposed include proactive referrals to victim services, co-locating forensic nurses with intimate partner violence units, assigning victim services workers to respond with police to intimate partner violence related calls for service, assessing awareness among victim service workers about brain injuries
 - o the partners on the application to date are PARC, the RCMP, and SOAR

- Inspired a research study on Brain Injury Recognition and Response among Fraser Valley Community and Criminal Justice Agencies led by Dr. Amanda McCormick, which received a Social Sciences and Research Council Explore Grant from UFV for \$6,645.

Funding

Keith Carlson, Principal Investigator, and Megan Harvey Co-PI, SSHRC Connection Grant to host a symposium of Community Engaged Scholars and Community Partners examining best practices in Land-based Learning and Fieldschools (\$20,000).

Keith Carlson, Co-Principal Investigator with Sue Hanley of the Homalco First Nation, BC Capacity Initiative “Čečegataw+ (Helping Each Other)” \$167,000.

Keith Carlson, Collaborator on grant where David Schaepe of the Sto:lo Research and Resource Centre is the Principal Investigator, "Residential Schools in S'ólh Téméxw: Finding Unmarked Burials at Multiple Sites Associated with Three Former Residential Schools, Researching Associated Deaths, and Creating a "Lost Stó:lō Children" Registry," BC Ministry of Indigenous Relations and Reconciliation, \$918,000

Keith Carlson awarded UFV Sustainability and Innovation fund for UFV's Peace and Reconciliation Centre, \$29,600.

Keith Carlson awarded Okidome Fondation funding for UFV's Peace and Reconciliation Centre, \$30,000.

Geetanjali Gill, Career Launcher (CiCan) \$3500 to fund the work of 1 student RA on this project, Zain Zaidi. Zain will continue to work on this research, together with 1 other student, during the summer term.

Publications, Presentations and Reports

Keith Carlson:

Peer-reviewed Publications:

- Keith Thor Carlson with Naxaxalhts'i (Sonny McHalsie), "Myth Making and Unmaking: Indigenous Sacred Sites, Settler Colonial Mobility, and Ontological Oppression." In Gesa Mackenthun, ed., Decolonizing Pre-History, (University of Arizona Press).
- Keith Thor Carlson, "'The Last Potlatch' and James Douglas' Vision of an Alternative Settler Colonialism," in Peter Cook, Neil Valance, John Lutz, Graham Brazier, and Hamar Foster, eds., To Share, Not Surrender: Indigenous and Settler Visions of Treaty Making in the Colonies of Vancouver Island and British Columbia, Vancouver, UBC Press 2021.
- Keith Thor Carlson, "'The Last Potlatch' and James Douglas' Vision of an Alternative Settler Colonialism," in Peter Cook, Neil Valance, John Lutz, Graham Brazier, and Hamar Foster, eds., To Share, Not Surrender: Indigenous and Settler Visions of Treaty Making in the Colonies of Vancouver Island and British Columbia, Vancouver, UBC Press 2021.

Non-Peer-reviewed Publications:

- Keith Thor Carlson, "A Brief and Brutal History of Canadian Colonialism: Despite the Painful History, there's always been Indigenous resistance. Is Settler Society Finally Waking Up? Theyee, June 17, 2021 (1,023 shares in first week of publication) <https://theyee.ca/Analysis/2021/06/17/Brief-Brutal-History-Canadian-Colonialism/>

Publications, Presentations and Reports

Publications (peer reviewed):

- Weinberg, N., Edwards, E., Huber, L., Sentell, Z., Spooner, J., A Newtonian algorithm for constant pressure molecular dynamics with periodic boundary conditions, *Mol. Phys.*, 2022, DOI: 10.1080/00268976.2022.2060145
- Sentell, Z., Penner, J., Spooner, J., Weinberg, N., Molecular Dynamics Calculations of Partial Molar Volumes of Amino Acids in Aqueous Solutions, *Can. J. Chem.*, 2022, Just-IN, DOI: 10.1139/cjc-2021-0217
- Shustov, G., Theoretical study of water-assisted reaction between methane and nitrosonium cation, *Can. J. Chem.*, 2022, 100, 360. DOI: 10.1139/cjc-2021-0299

Presentations (speaker indicated by *):

- Weinberg, N., Edwards, E., Huber, L., Sentell, Z., Spooner, J.* (2022) A Newtonian Algorithm for Constant Pressure Molecular Dynamics with Periodic Boundary Conditions, APS March Meeting (APSMM)
- Whatley, B.*, Lastoria, G.*, Gajsek, K.*, Spooner, J., Weinberg, N., (2021) Efficacy of molecular clutch systems for large scale molecular machines. UFV Student Research Day
- Penner, J., Wilson, D., Spooner, J., Weinberg, N.* (2021) High Pressure Vibrational Spectra of Molecules via Molecular Dynamics Simulations. APSMM
- Spooner, J.*, Weinberg, N., (2021) Reaction Profiles and Energy Surfaces of Compressed Species Under Extreme Conditions. APSMM

Accepted Abstracts:

- Spooner, J.*, Weinberg, N., (2022) High Pressure Energy Surfaces and Profiles: General Approach to be presented at the 12th Triennial Congress of the World Association of Theoretical and Computational Chemists in July
- Spooner, J.*, Weinberg, N., (2022) High Pressure Energy Surfaces and Profiles: Specific Examples to be presented at the 12th Triennial Congress of the World Association of Theoretical and Computational Chemists in July

Plans for the Upcoming Year

Research projects:

- Theoretical calculation of partition coefficients for Ru anticancer complexes
- Theoretical studies of furan and thiophene nanothreads
- Theoretical studies of pressure-driven molecular machines
- Molecular dynamics calculation of activation volumes for diels-alder reactions of thiobenzophenone
- Molecular dynamics calculations of molecular volumes for constrained molecules
- Thermodynamic stability of petroleum hydrocarbons at geochemical conditions