

# 2022 CENTRES AND INSTITUTES EXECUTIVE SUMMARY



CANADA'S ENGAGED UNIVERSITY

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# CENTRES AND INSTITUTES

## OVER 60 RESEARCH CENTRES AND INSTITUTES CONTRIBUTE TO SFU'S POSITION AMONG CANADA'S TOP UNIVERSITIES IN RESEARCH IMPACT

SIMON FRASER UNIVERSITY'S VICE-PRESIDENT, RESEARCH AND INTERNATIONAL PORTFOLIO PROMOTES WIDE-REACHING COLLABORATIONS AT THE LOCAL, NATIONAL AND INTERNATIONAL LEVELS, TO FOSTER A CONTINUUM OF KNOWLEDGE GENERATION AND KNOWLEDGE TRANSFER ACROSS DIVERSE SECTORS

At SFU, much of the work undertaken by research centres and research institutes supports the bringing together of diverse perspectives to confront key scientific and global challenges. Aligned with university and faculty strategic priorities, SFU centres and institutes foster creative interaction and stimulate engagement with students and visiting scholars.

In 2022, the COVID-19 pandemic continued to affect research projects, inhibiting research activities in some fields, while creating opportunities in others. SFU's research centres and institutes were able to adapt and continue their research and engagement projects where possible. 2022 also saw strong commitments to global challenges such as health and well-being, sustainable development, and climate change adaptation and mitigation. SFU's 2023-2028 Strategic Research Plan will help guide the direction and focus of research at SFU in the coming years.

### RESEARCH CENTRES

Research centres are formally designated, non-departmental units facilitating collaborative research mainly within a single faculty. The activities of a research centre support the research mission of its home faculty and require the support of its dean.

Research centres may include in their membership SFU researchers from outside of their home faculties.



### RESEARCH INSTITUTES

Research institutes are formally designated non-departmental units facilitating extensive multi-faculty collaborative research, often enhanced by research relationships with other universities and/or other stakeholders (e.g., government, community or private sector affiliates) or by shared resources and infrastructure. The activities of research institutes support the strategic research mission of the university.

Prior to applying for research institute status, members of institutes often have a history of collaborative activity as a group (e.g., co-supervision of students, co-publications, or shared research data, funding and/or projects).

*In this summary we share the work of select research centres and research institutes at SFU in 2022.*

*See the attached Appendix for the full list of SFU centres and institutes.*



## INNOVATION FOR GOOD

### INSTITUTE FOR NEUROSCIENCE AND NEUROTECHNOLOGY

Launched in March 2022, SFU's Institute for Neuroscience and Neurotechnology (INN) is a cross-disciplinary research hub that empowers researchers to engage in cutting-edge neuroscience research and collaboration. As SFU's hub for neuroscience research, training and community engagement, it connects SFU researchers from a broad range of disciplinary areas and opens pathways to grow in capacity for innovative, relevant and translational research in neuroscience and neurotechnology.

Addressing brain disorders that affect us across the lifespan, INN supports SFU researchers to understand and develop novel treatments with an inclusive, community-based approach.

Broad engagement is well underway. The [INN website](#) launched in March 2022 and two virtual town halls for the SFU community were hosted, as well as a meet and greet for donors. A seminar series featured speakers throughout the year. INN also led an initiative to combine efforts with UBC and form a regional alliance for scientists in Western Canada through the international INCF organization, creating the Western Canadian Neuroimaging Consortium.

INN director Randy McIntosh was interviewed for [Conversations That Matter](#) and participated in a [Q&A on SFU's Faculty and Staff Dashboard](#). INN associate director Dan Marigold's paper on motor memory was featured in an [SFU News story](#). Both McIntosh and Marigold participated in a national virtual symposium on "Game Changers" that was held for the Health Caucus and Members of Parliament in Ottawa, organized by Research Canada.

## RESEARCH FOR GOOD

### CHRONIC PAIN RESEARCH INSTITUTE

Chronic pain is a complex phenomenon that affects at least seven million Canadians, impacting their quality of life and costing the economy millions of dollars. The Chronic Pain Research Institute works collaboratively with people who live with persistent pain, their physicians, caregivers and healthcare professionals to invent and design technologies to help manage and relieve chronic pain. These technologies include immersive virtual reality (VR), immersive games, personal data capture and visualization, physiological sensing, wearable computing, and mobile technologies and systems.

Recent accomplishments of the Institute include Easa Therapeutics, a health technology startup company founded by Diane Gromala, Chris Shaw and Howard Rose to sustainably deploy VR chronic pain therapies in pain clinics. Testing in the U.S. began with UHG—the world’s largest health insurer—until the COVID-19 pandemic suspended these inaugural widespread efforts.

The institute received \$8 million in funding from Canada’s Digital Technology Supercluster and MITACS to develop COVID-19 vaccination scheduling software in partnership with Cambian, WELL Health, IBM Canada, Tickit Health, Providence Healthcare, LifeLabs and SFU.

The project integrated several operational systems to enable seamless booking across systems, forecasting demand and supply chain problems. The institute ensured vulnerable and at-risk individuals were identified and could use the system to get the first vaccinations. The institute continues to develop systems for tracking long COVID-19 and chronic conditions.

Although the ongoing pandemic has made outreach activities a challenge, public events and workshops in 2022 included the “Skunkworks” collaboration with Providence Health Research Institute, a two-day intensive session to connect innovators with real-world challenges in pain. The institute also partnered with the Arthritis Research Centre of Canada on a “Citizen Science” project where patient-partners across British Columbia provide input online on how pain affects their quality of life. Members of the institute presented at the International Association on the Study of Pain’s World Congress on Pain 2022 in Toronto.

Until recently, large health tech systems were engineered primarily as automated systems that healthcare workers needed to adapt to—however patient-centered ease of use has become an urgent need in health care. The institute is currently working on health tech tracking tools for managing menopause and combating stigma via VR, and has conducted fieldwork with midwives in rural Kenya and in rural B.C.

The institute continues to champion immersive VR in healthcare venues to combat chronic pain and is excited to expand the reach of this cutting-edge research filed.



## STRENGTHENING DEMOCRACY, JUSTICE, EQUITY AND EDUCATION

### FIRST NATIONS LANGUAGE CENTRE

Based in the Faculty of Arts and Social Sciences, the First Nations Language Centre collaborates with First Nations organizations across B.C. to revitalize and preserve the region's rich linguistic heritage, and its members are credited with a growing list of accomplishments in this field.

The centre's director Marianne Ignace was named an SFU Distinguished Professor, in recognition of her longstanding work in critically endangered Indigenous languages. Her Letter of Intent towards the New Frontiers in Research Transformation Grant was successful, and the planned submission will continue to bring the centre's work into further international collaboration.

Doctoral student Lucy Bell Sdahl K'awaas was named the recipient of the 2021 Sterling Prize in Support of Controversy for her significant work on the repatriation of Haida ancestral remains and treasures. As part of the award ceremony Bell Sdahl K'awaas delivered a timely public lecture on challenging the role of museums in an era of reconciliation.

She created a presentation on sGaaga, medicine-man materials in museums in Xaad kil, the Haida language with ancient philosophical beliefs on traditional healing.

She became a Smithsonian Fellow, was accepted by the Burke Museum's Bill Holm visiting scholar program and received the B.C. Museums Association's Museum Stewardship Award. Bell Sdahl K'awaas continues her trailblazing work with Haida Elders, the Haida museum and repatriation professionals.

Members of the centre published numerous scholarly works on Indigenous languages, revitalization and pedagogies, and collaborated on a variety of multimedia works including Anno Kitsiksaahkominnon (This is Our Land) A Blackfoot graphic novel. The centre's members participated in events hosted by the Canadian Museums Association, and the B.C. Museums Association.

The centre was awarded \$150,000 from the Lobstick Foundation as an endowment for graduate and undergraduate awards at SFU to support Indigenous language learning and revitalization, featured in the news section on SFU's Faculty of Arts and Social Sciences [website](#).

The First Nations Language Centre has agreed to formally change its name to the Indigenous Languages Research Centre.

# SFU CENTRES

## SUPPORTING HEALTH AND WELLNESS OF INDIVIDUALS, POPULATIONS AND COMMUNITIES

### CHILDREN'S HEALTH POLICY CENTRE

The Children's Health Policy Centre (CHPC) at SFU is an interdisciplinary research group in the Faculty of Health Sciences, focused on improving the social and emotional wellbeing of all children and on the public policies needed to reach these goals—through research, policy consultation, service and teaching. The work of the centre compliments the faculty and university goals to improve the health of populations—locally, nationally and globally. CHPC is nearing completion of the B.C. Healthy Connections Project (BCHCP) evaluating the effectiveness of the Nurse-Family Partnership (NFP) program with nearly 1,500 mothers and children across the province. Funded by the Government of B.C., with support from four of B.C.'s Health Authorities, BCHCP followed the cohort over two and a half years from pregnancy until children reached age two.

First outcomes have shown that NFP has reduced pre-natal nicotine and cannabis exposure. The study is currently completing an analysis of the program's impact on child injuries, cognitive and language development and mental health, as well as on maternal wellbeing. CHPC continues to collaborate with academic, health-care, government and policy partners and study participants across the province to interpret and act upon the rich data provided by the project. Work is expected to continue throughout 2023 and beyond. Areas of ongoing collaboration include: learning from the over one quarter of Indigenous families in the study about adversities faced and how to better support healthy development; improving mental health services for children across B.C. and Canada; informing the public conversation about better meeting children's needs; evaluating the impact of COVID-19 on children's health; and exploring pathways for better outcomes for children with autism spectrum disorder.



The centre engaged in numerous public outreach events, supporting innovative new research projects led by Indigenous and other community groups and leading quantitative studies evaluating important public programs. They provide talks, consultations and expert input with related B.C. Ministries as well as regional Health Authorities. They presented to researchers and mentees at: McMaster University's national Pathways in Autism Graduate Training Seminar; UBC's graduate School of Population and Public Health; and SFU's Inaugural FHS Student Research Conference. As well, CHPC team members were invited to present to the Prince George Native Friendship Centre, and to the Government of B.C.'s Select Standing Committee on Children and Youth.

The work of the centre has been highlighted in local, national and international media. CHPC has been featured in [SFU News](#); and [SFU's Scholarly Impact of the Week](#). The centre updated their [website](#) and their [quarterly report](#) reaches over 15,000 readers annually.



## ADVANCING COMMUNITY-CENTRED CLIMATE INNOVATION

### INSTITUTE FOR ENVIRONMENTAL LEARNING

The Institute for Environmental Learning (IEL) is a B.C.-based partnership created to develop and support environmental learning and community-engaged research in B.C. communities, schools and post-secondary institutions. Collaborating with researchers, educators and government stakeholders, facilitating education and action-oriented research around environmental learning and sustainability, IEL was chartered by the United Nations as a Regional Centre for Expertise on Education for Sustainable Development representing B.C. and the North Cascades.

The centre's 2022 highlights include three funded graduate fellowships at the Van Dusen Botanical Gardens in Vancouver; ongoing research partnerships with OceanWise and Science World; securing funding from Pacific Institute for Climate Solutions for the three-year project: Infusing Climate Education into the BC Curriculum; the re-launch of the International Journal of Informal Science and Environmental Learning; new teaching and research developments in partnership with the Howe Sound UNESCO Biosphere Reserve Initiative and the Mount Arrowsmith Biosphere Research Institute at Vancouver Island University; and collaborating with the Wild About Outdoor Learning Society to host the Wild About Vancouver outdoor education festival at Stanley Park.

### PACIFIC WATER RESEARCH CENTRE

The Pacific Water Research Centre (PWRC) promotes and mobilizes research and technologies that address water issues locally, nationally and globally. A wide range of activities has allowed PWRC to have an impact on several important agendas, such as: creating knowledge-based solutions for the Columbia River Treaty; addressing gender, water security and peacebuilding nexus in the Arab Middle-East; building flood-resistant rain gardens; providing sustainable potable water and greenhouse crops; developing the international water decade alliance; and providing support to the municipality for its adaptation to green infrastructure.

PWRC is working on the multi-year Nutrition through Engagement and Agricultural Technologies project—a collaboration with diverse First Nation communities in B.C. The goal of the project is to improve the health, prosperity and economic wellbeing of these communities, and to achieve food sovereignty while ensuring sustainable access to water and energy. PWRC engages with Indigenous leaders to help increase community resilience to societal disruptions such as the COVID-19 pandemic and environmental stresses of climate change.

PWRG is a key part of the International Water Decade Alliance, a Canada-wide alliance of research institutions, of which SFU is a member. The Alliance serves a platform for global dialogue, capacity development and public engagement on water challenges.

# SFU CENTRES

## ADVANCING COMMUNITY-CENTRED CLIMATE INNOVATION

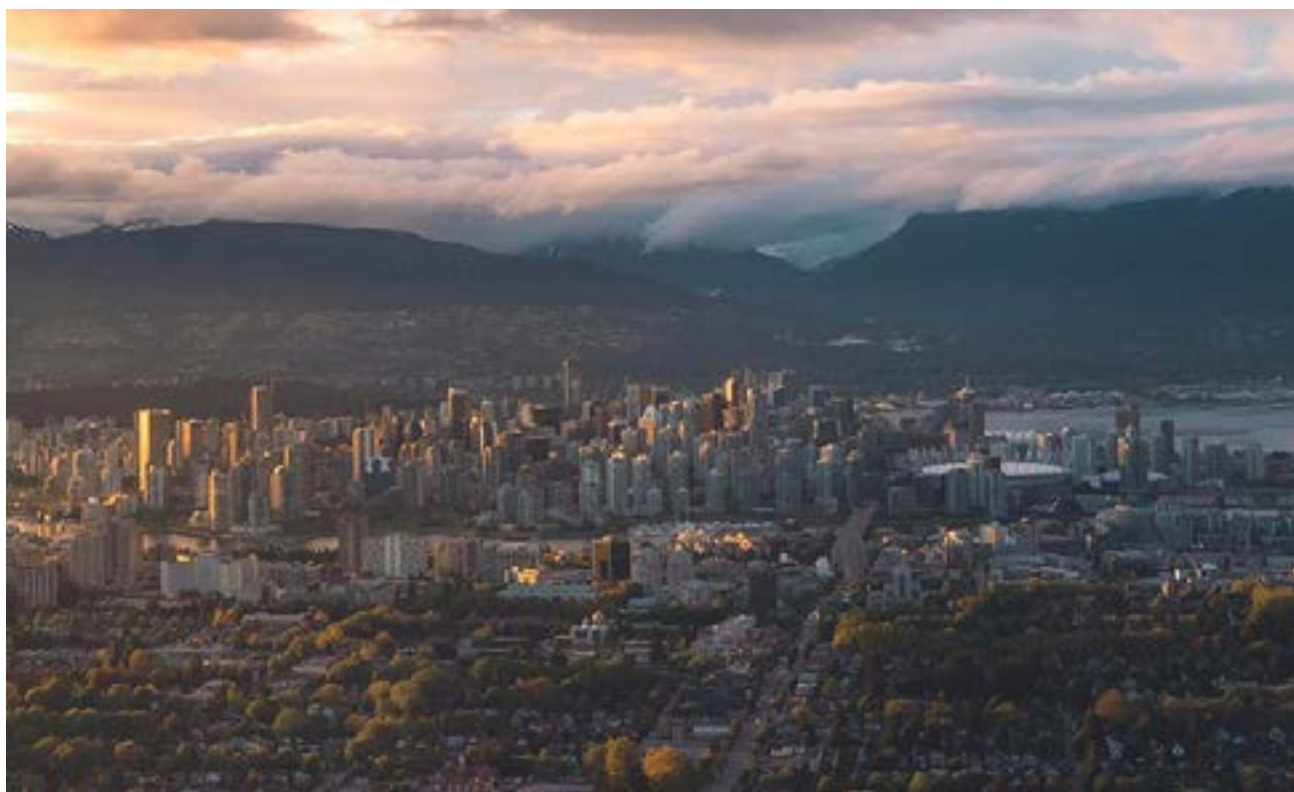
### CENTRE FOR SUSTAINABLE DEVELOPMENT

The Faculty of Environment's Centre for Sustainable Development is the research focal point for SFU's commitments to be a leading institution in the transition to a sustainable society. The centre leverages the resources and talents of the university to encourage the study of sustainable development through research and community engagement. They were a core member of team for SFU's Canada First Research Excellence Fund (CFREF) application for community-centred climate innovation.

In 2022, the centre underwent a staffing transition, however engagement and outreach activities continued.

They participated in the Times Higher Education Global Impact Forum on Sustainable Cities, hosted by SFU and attend by representatives from over 600 organizations worldwide, and featured in [SFU's Faculty and Staff Dashboard](#). They also delivered two sessions at the inaugural Community-Engaged Research initiative (CERi) Horizons conference.

Centre director Meg Holden delivered a keynote lecture at the Vivre en Ville conference in Montreal on sustainable neighbourhood redevelopments around the world. Holden was an invited panelist at an American Association of Geographers session on Humanist planning in the Anthropocene and a presenter at the Royal Geographical Society - Institute of British Geography.





## STRENGTHENING DEMOCRACY, JUSTICE, EQUITY AND EDUCATION

### CENTRE FOR GLOBAL WORKFORCE STRATEGY

The Centre for Global Workforce Strategy at the SFU Beedie School of Business carries out multidisciplinary research on issues surrounding effective workforce management strategies on a global scale. Since its foundation, the centre has been involved in research on cross-cultural management, international human resource management and broader management and human resources issues in diverse workplaces.

Key current projects supported by the centre are the 5C project (Cross Cultural Collaboration on Contemporary Careers), Cranet (the Cranfield Network of International Human Resource Management) and a project on skilled migrants workplace integration. In addition to supporting research, the centre activities include: developing doctoral students; supporting and networking with scholars in the fields of cross-cultural management and international human resources management; professional outreach; professional development workshops; supporting conferences or public forums on topical subjects; and workshops to promote the activities and findings of the centre to both academic and business audiences.

The centre's Write Club—a peer writing group where Beedie faculty members exchange drafts of current work and receive feedback—continues to meet regularly.

One of the most significant accomplishments to date is the webinar series on International Human Resource Management that was initiated by the centre in 2020 and continues to generate great interest. Comprised of keynote presentations by eminent international scholars, the series is broadcast over Zoom and recorded for YouTube. Attendance per webinar is often in the hundreds and represents over 50 countries. The YouTube Channel has hundreds of subscribers and videos have been viewed over 7,300 times, as of 2022.

In addition, the centre's director Mila Lazarova participated in a webinar on Managing Gender Equity and Diversity Across Borders, organized by Women in the Academy of International Business; moderated the “Beedie Breaks the Bias” panel on Human Resources and Diversity on International Women's Day 2022; and represented the centre at the Academy of Management academic conference.



# SFU CENTRES

## EXPANDING THE FOUNDATIONS OF KNOWLEDGE AND UNDERSTANDING OUR ORIGINS

### THE CENTRE FOR IMAGINATION IN RESEARCH, CULTURE & EDUCATION

The Centre for Imagination in Research, Culture & Education (CIRCE) is an international research centre affiliated with the Faculty of Education. It is interested in imagination in all its varied forms, with deepest roots in education, and many members work directly with educators, schools and other sites of learning and teaching. At the same time, CIRCE recognizes the countless ways in which imagination is entwined with the world—not only in human culture and societies, but in the life of the Earth itself.

Successes in 2022 include the continuation of the partnership with the Universidad Finis Terrae in Santiago, Chile with whom they hosted a four-day online workshop for teachers and graduate students. Discussions are underway regarding an eventual return to in-person seminars in Vancouver and/or Santiago, as well as the possibility of organizing an international conference on imagination and education. CIRCE is also working on a joint mentoring and research program in imaginative education in collaboration with the Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico. The centre's director Mark Fettes is serving as an external supervisor for a doctoral student at the university, Carolina López, who also holds a master's degree from SFU.

Director Fettes and Academic Council member Michael Datura worked closely with Stephen Collis of the SFU Institute for Humanities to jointly sponsor, plan and fundraise for a unique Geopoetics Symposium and Residency on Cortes Island, B.C. After two postponements due to the COVID-19 pandemic, the event finally took place in 2022, bringing together educators, geographers, environmental philosophers, poets, musicians and visual artists from as far away as Australia and Ireland. The event was supported by grants from the SSHRC Connections program and the SFU VPA Conference Fund.



Steering Committee members Fettes and Sean Blenkinsop and Academic Council member Laura Piersol edited the book “Ecoportraiture: The Art of Research When Nature Matters” published in 2022 as part of the Peter Lang series “Rethinking Environmental Education.” Drawing on SSHRC-funded research by the editors and their collaborators, the book offers a variety of perspectives, examples, and practical techniques for adapting the research tradition of portraiture to include the voices and interests of the more-than-human world. In a field traditionally dominated by more quantitative and human-centred methodologies, the work offers a fresh set of possibilities for research in place-, nature- and land-based education.

Led by CIRCE Academic Council member Gillian Judson, the Walking Curriculum Challenge 2022 invited educators around the world to commit to taking their students outside every day for 30 days, starting on Earth Day (April 22), rain or shine. Judson's book, “The Walking Curriculum: Evoking Wonder And Developing A Sense of Place,” is offered as an optional guide and source of inspiration. Registrations for the challenge, at just under 400, were down from 2021's record of more than 800 teachers across B.C. and beyond, but it is clear the Walking Curriculum continues to attract practitioners by word of mouth and social media.

CIRCE lost its founder in 2022, Kieren Egan, whose book on imaginative education, “The Educated Mind,” celebrated its 25th anniversary. An online celebration and memorial for Egan was attended by over 100 participants.

## TRANSFORMING INDUSTRY AND ECONOMIES THROUGH TECHNOLOGY

### CENTRE FOR HIGH-THROUGHPUT CHEMICAL BIOLOGY

The Centre for High-Throughput Chemical Biology (HTCB) is a Faculty of Science facility that provides cutting-edge high-throughput liquid handling robotics capability for projects at the intersection of chemistry and biology. It is primarily used for high-throughput screening applications.

In 2022, HTCB had a highly successful year. Major accomplishments include the award of 7-year funding support through the Canada Foundation for Innovation Major Science Initiatives program as part of a larger consortium application through the Glyconet organization at the University of Alberta; direct training of 31 highly qualified personnel on liquid handling robotics; lab automation and high-throughput screen design; external projects with UBC, the BC Children's Hospital Research Institute, University of Alberta and others; continued provision of fee-for-service work for regional biotechnology companies; and 28 research outputs directly connected to the center, including publications and conference presentations. HTCB has also supported successful grant applications by faculty and completed final logistical details for installation of a new ultra-fast high-content microscope.





# APPENDIX

## RESEARCH CENTRES

- Pacific Water Research Centre (PWRC)
- Africa Research Centre
- Centre d'études francophones Québec-Pacifique
- David Lam Centre for International Communication
- Centre for Corporate Governance and Sustainability
- Centre for Research on Early Child Health and Education (CRECHE)
- Centre for Collaborative Action on Indigenous Health Governance
- Centre for Natural Hazards Research
- Centre for Wildlife Ecology
- Bill Reid Centre for Northwest Coast Studies
- Centre for Comparative Muslim Studies
- Centre for Public Policy Research
- Centre for Restorative Justice
- Centre for Scottish Studies
- First Nations Language Centre
- Gerontology Research Centre
- Stavros Niarchos Foundation Centre for Hellenic Studies
- The SFU Morgan Centre for Labour Research
- Centre for Global Workforce
- Jack Austin Centre for Asia Pacific Studies
- Centre for Education, Law and Society
- Centre for Research on International Education
- Centre for the Study of Educational Leadership and Policy
- Centre for Imagination in Research, Culture & Education
- Centre for Sustainable Development
- Centre for Applied Research in Mental Health and Addiction
- Children's Health Policy Centre
- HIV/AIDS Research Centre (HRC)
- Centre for Cell Biology, Development and Disease (C2D2)
- Centre for Experimental and Constructive Mathematics
- Centre for High-Throughput Chemical Biology (C-HTCB)
- Evolutionary and Behavioural Ecology Research Group

## RESEARCH INSTITUTES

- Centre for Operations Research and Decision Sciences
- Centre for Studies in Print and Media Cultures
- International Cybercrime Research Centre (ICRC)
- Science and Technology for Aging Research Institute (STAR)
- The Institute on Violence, Terrorism, and Security
- Institute for the Humanities
- Institute of Governance Studies
- Institute for Black and African Diaspora Research and Engagement
- Charles Chang Institute for Entrepreneurship
- Cooperative Resource Management Institute
- Canadian Institute for Studies in Publishing Reviewed
- Centre for Education Research and Policy
- Centre for Forensic Research
- Chronic Pain Research Institute
- Digital Democracies Institute
- Indigenous Research Institute
- Institute for Environmental Learning
- Institute for Intersectionality Research and Policy
- Institute for Neuroscience and Neurotechnology (INN)
- Mental Health, Law and Policy Institute
- Institute for Performance Studies (IPS)
- Institute for the Reduction of Youth Violence
- Institute for Transpacific Cultural Research (ITCR)
- International Centre for Criminal Law Reform & Criminal Justice Policy
- Pacific Institute for the Mathematical Sciences (PIMS)
- Vancouver Institute for Visual Analytics (VIVA)
- Western Canadian Universities Marine Sciences Society (Bamfield)

**In addition to the above, the following research initiatives are associated with the university.**

- BC SUPPORT Unit Fraser Centre
- Business Administration Research Initiatives
- Canadian Statistical Sciences Institute (CANSSI)
- Educational Neuroscience Laboratory (Engrammetron)
- FREDA Centre for Research on Violence Against Women and Children
- Imaginative Education Research Group
- Institute for the Study of Teaching and Learning in the Disciplines
- Metropolis British Columbia, Centre of Excellence for Research on Immigration and Diversity
- Pacific Institute for Climate Solutions
- Social Attention Research Group (SARG)
- TRIUMF

**RESEARCH AT SFU SPANS EIGHT  
FACULTIES, COVERING A BROAD  
RANGE OF FUNDAMENTAL,  
INTERDISCIPLINARY AND APPLIED  
RESEARCH TOPICS**

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