SUPERCOMPUTER CEDAR

ENGAGE THE NATION. ACCELERATE DISCOVERY.

Simon Fraser University's Supercomputer Cedar is one of the most powerful academic supercomputers in Canada. Cedar provides the scale and capacity that is paving the way for new research breakthroughs.

Cedar is one of five national systems that make up Canada's Digital Research Infrastructure. Under the stewardship of the Digital Research Alliance of Canada, Cedar was deployed as part of one of the biggest advanced research computing renewals in Canada's history. The Digital Research Alliance of Canada accelerates research and innovation by deploying state-of-the-art advanced research computing systems, storage and software solutions.

As the future of research moves to agile prototyping and integrating data driven approaches across the spectrum of research, SFU has world leading expertise to guide researchers on their big data journey by using Cedar.

High Performance Computing (HPC)—also known as supercomputing—empowers Canadian researchers to tackle large, difficult problems and conduct research investigations as it dramatically speeds up research, offering processing speeds thousands of times faster than a traditional desktop.

Most research today is data intensive, whether it is genomics, advanced materials, or humanities and social sciences. Cedar serves a diverse range of research projects and enable discoveries that may not have otherwise happened, because the tools were simply not there.

RESEARCH FOR GOOD

Cedar provides the computing power Canadian researchers need to achieve transformational innovations that directly benefit Canadians. Just some of these include personalized medicine for better patient care, green technologies to help fight climate change and artificial intelligence research that will contribute to the Canadian economy.

Some examples include:

- **Developing sustainable approaches to understand and control the spread of illnesses.** Fiona Brinkman, SFU professor in molecular biology and biochemistry is harnessing the power of Cedar to sequence the DNA of disease-causing microbes in a secure environment to identify and track infectious disease agents. This will elicit key information about the origins of infectious disease outbreaks, and how to control them.
- **Building ethical methods for data mining and analysis.** Jian Pei, SFU professor in computing science and Royal Society of Canada Fellow uses Cedar to conduct research on data mining to ensure it is produced, shared and used in an effective, efficient, fair and ethical manner that creates positive change in our lives.
- **Understanding the potential of the Higgs boson through international collaboration.** Mike Vetterli, SFU professor of physics uses Cedar to analyze huge quantities of data produced by the Large Hadron Collider at CERN in Geneva. Cedar is part of a world-wide network of sites enabling more than 3,000 researchers from more than 30 countries to deepen our understanding of how the universe works.

ACCESS TO CEDAR

Researchers have access to a robust suite of services provided by a world-class advanced research computing team at the university. SFU's Research Computing Group is a dedicated and experienced team that provides consultation, expertise and insight to guide researchers on their scientific journey by using Cedar.

ENGAGE WITH US

Connect with SFU to learn how you can access Cedar to accelerate the impact of your research. Learn more about SFU's academic supercomputer at sfu.ca/supercomputer-cedar.