

Institution

British Columbia Institute of
Technology (BCIT)

Principal Researcher

Dr. Fitsum Tariku
Director
Building Science Centre of
Excellence

Research Field

Sustainability and
Environment

Student Involvement

18 student researchers
4 employed students

Partners & Collaborators

BC Building Industry

Funding Sources

Canada Research Chairs

Western Economic
Diversification

Canada Foundation for
Innovation

British Columbia Knowledge
Development Fund

Natural Sciences and
Engineering Research Council
of Canada (NSERC)

Project Location

Vancouver, BC

Shutting the Tap on Leaky Condos

Best practice guidelines and building codes to help resolve deficiencies in building design

Dr. Fitsum Tariku, Canada Research Chair in Whole-Building Performance at BCIT, is developing tools that enable the design of energy-efficient and environmentally friendly buildings that are durable, economical and healthy for their occupants. Tariku's research will help to identify and resolve critical weaknesses in building systems, such as the "leaky condo" crisis.

Building construction uses considerable amounts of natural resources and energy. When mistakes are made, the financial and health results can be catastrophic. It has been estimated that British Columbia's "leaky condo crisis" in the 1990s cost the province \$1 billion.

In the 1970s, buildings that were super-insulated and airtight led to high humidity levels and health problems. Today, there is renewed interest in energy conservation, and a drive for designs that reduce natural resource consumption and greenhouse gas emissions. However, these new materials, systems and designs need to be evaluated to ensure they do not inadvertently cause problems.

Dr. Fitsum Tariku, Canada Research Chair in Whole-Building Performance, is developing tools that enable the design of energy-efficient and environmentally friendly buildings that are durable, economical and healthy for their occupants.

By examining everything from materials and subsystems to whole-building performance, Tariku's research will help to identify and resolve critical weaknesses in the building systems on which we all depend.

Dr. Tariku's research has led to the creation of the BCIT Building Science Centre of Excellence (BSCE), a regional education and research centre for Building Science and Building Engineering. The mission of the Centre is to advance the state of practice for the building construction industry, and to become a recognized knowledge-based node in the global network of building science experts. The BSCE is located within the School of Construction and the Environment at BCIT.

The development of the Centre has led to BCIT's first Masters programs, an M. Eng. and an M.A.S. in Building Science. The first graduates were in 2013, and 11 current or just completed graduate research projects.

<http://commons.bcit.ca/bsce/index.html>