Bridging the Gap between Computing Science and Software Engineering

R&D activities in SFU's Software Technology Lab focus on mathematical foundations of Software Engineering and innovative technology for high-level systems design. Mathematical techniques and supporting tools improve the quality of software designs by establishing key system attributes in early design stages. Practical applications in various projects focus on system architectures in e-commerce, industrial automation, wireless communication, and telecommunication.

Our current projects are:

**The Safeguard Project:** It provides a novel computational approach to checking consistency, coherence and completeness of aviation security measures. It provides a platform for systematic analysis of the efficiency and effectiveness of such requirements.

**The Mastermind Project:** This is an interdisciplinary research project in Computational Criminology that provides criminologists with innovative computational models and supporting tools for studying crime and leads to novel strategies for urban planning, policy making and crime prevention.

**The CoreASM Project:** This is an interdisciplinary research project in Computational Criminology that provides criminologists with innovative computational models and supporting tools for studying crime and leads to novel strategies for urban planning, policy making and crime prevention.

**Web Services Architecture:** It focuses on developing an executable formalization of BPEL4WS as a semantic basis for checking correctness and completeness of the informal language definition using experimental validation in combination with inspection by analytical means.