

The Problem

Slip-induced falls are the **number one** non-natural cause of death in Finland, and are a pervasive problem in many other icy climates. Current fall protection devices are not widely adopted, for various reasons. Airbag-based solutions have difficulty sensing that a fall is occurring; padding solutions are often undesirable and heavy. We seek to improve user compliance by developing an attractive, easily adopted solution that consumers will *want to use*.

Our Goal

Intelligent Fall Protection is developing a solution to mitigate injuries when a person falls, particularly falls that might occur in outdoor, icy conditions.

Our Concept

We envision a modified version of an airbag design that uses a much smaller airbag. A jacket will contain airbags that, when inflated, will remain thin and act in a manner similar to foam padding. Our airbag only needs to absorb enough energy to prevent fractures; it does not need to act in a manner similar to an automotive airbag. By keeping the airbag thin, even when inflated, we hope to increase the “wearability” of our device and to make false alarms a minor event. We also envision a sensing solution that will *anticipate* a fall *before* it happens, rather than react to a fall *while* it is in progress.

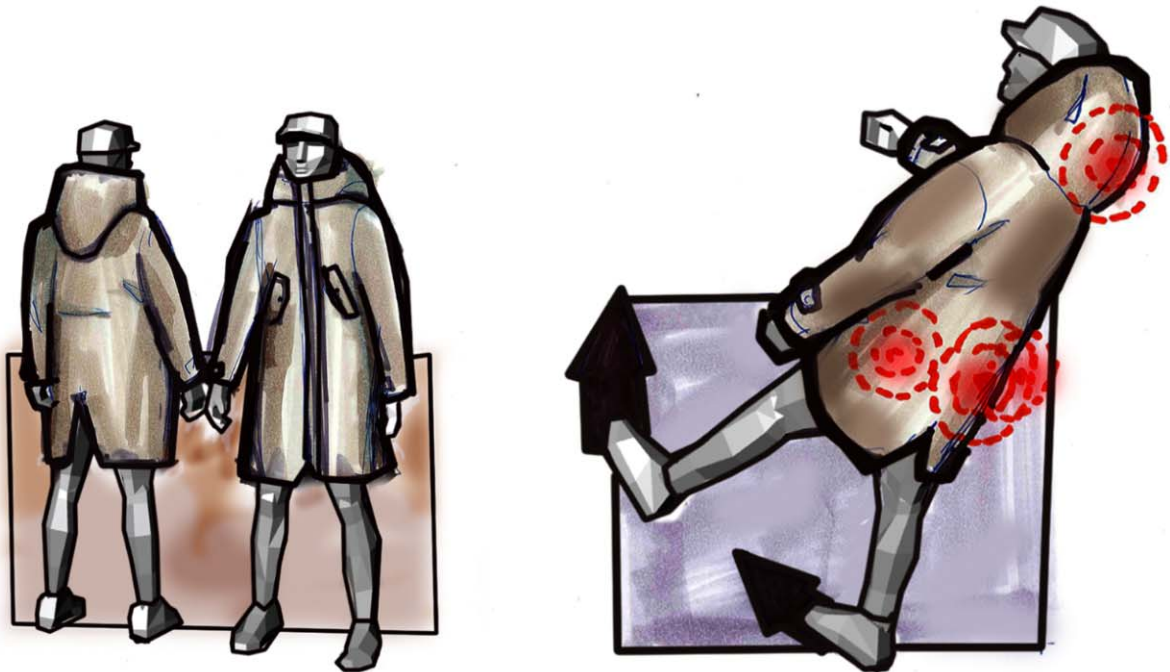


Image: Early concept sketches of a protective airbag platform that will protect the head and hips.

How Can You Help Us?

Intelligent Fall Protection is interested in adding one or more computer scientists to our team. You will work closely with current team members (comprised of Stanford and Finnish students) to develop our concept and produce a fully functional prototype. A primary responsibility will be in developing a sensor network and risk-evaluation algorithm, but you will also become an integral part of the team, contributing your knowledge and opinions to create the best possible solution. We look forward to working with you and are definitely excited to add new members to the IFP team!
