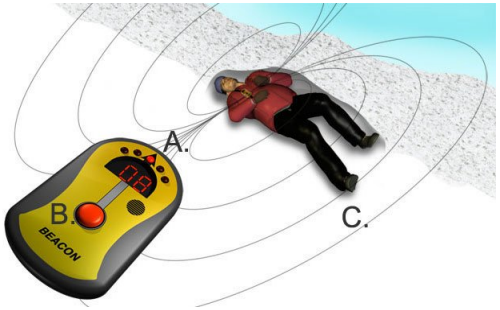
Projet d'ingénierie simultanée 2018

# Wearable Deployable Robot for Avalanche Rescue

Supervisor: Amy Wu, BioRobotics Lab (Prof. Auke Ijspeert)

Avalanches survivability decreases rapidly with time.

Current systems:

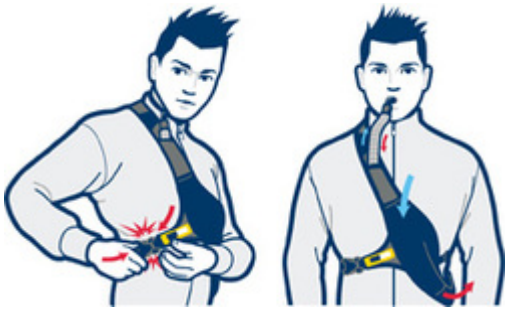



**Transceivers/beacons**

- Can locate victim
- But provides no air


**Airbags**

- Keeps person afloat
- But is expensive



**Avalung**

- Provides air
- But need to prepare ahead of time

Image sources: Wikipedia, evo.com, snowbrains.com, avalancheswillow.weebly.com

Projet d'ingénierie simultanée 2018

# Wearable Deployable Robot for Avalanche Rescue

Supervisor: Amy Wu, BioRobotics Lab (Prof. Auke Ijspeert)

**Goal**: to build **a wearable robotic device** that deploys and **digs itself** to the surface, dragging a tube to **provide air** to the trapped human

Design requirements:

- Safe to use
- Wearable (small and light)
- Can detect up direction
- Can dig itself out of snow while deploying and dragging an air tube
- Should attract attention at the surface

One possible design concept: