



Wearable Technologies Workshop Challenge Request

April 29 & 30, 2019

hosted by NASA at the Johnson Space Center

Challenge Title: Emergency Avalanche Transceiver Garments

Organization Name: Patagonia

Team Assignments Available: 2



Summary of the Challenge and Team Project

Background:

For more than 40 years, Patagonia's technical products have been designed for longevity and maximum performance in extreme environments. Most emergency avalanche transceivers are worn on a sling & belt harness across the torso, but some outerwear brands are selling pants with a specifically designed beacon pocket – but have not externally communicated the pros/cons of one system versus the other.

Problem Statement:

Based on primary and secondary research, Patagonia is interested in 3-5 prototypes that minimize interference (due to body placement, materials, gear and other electronics typically carry during backcountry exploration) and/or "boost" the beacon's signal.

Important Design Considerations (These can be discussed, and possibly negotiated, in more detail after the Team has been assigned):

On the proposed garments, the beacon must securely attach, operate safely and is easily accessible while allowing for freedom of movement and versatility in layering with ease.

What funding and/or resources can be provided to each Team? (The details of the payment arrangements must be negotiated with the Team.)

Patagonia will provide the team with garments & two beacon transceivers for primary research and fabrics for prototyping in addition to the required funds (about \$2000) to travel to Houston for the Wearable Technologies Workshop in April.

Deliverables (the final product the Team is to provide – such as a report, garment, user evaluation, ...):

Prototypes based on primary and secondary research performed by the team.

How Will the Results Be Used?

These results will inform the design direction for our garments likely to be used in backcountry explorations.

What deliverables (if any) are to be transferred to the organization at the end of the project?

Literature review & primary research