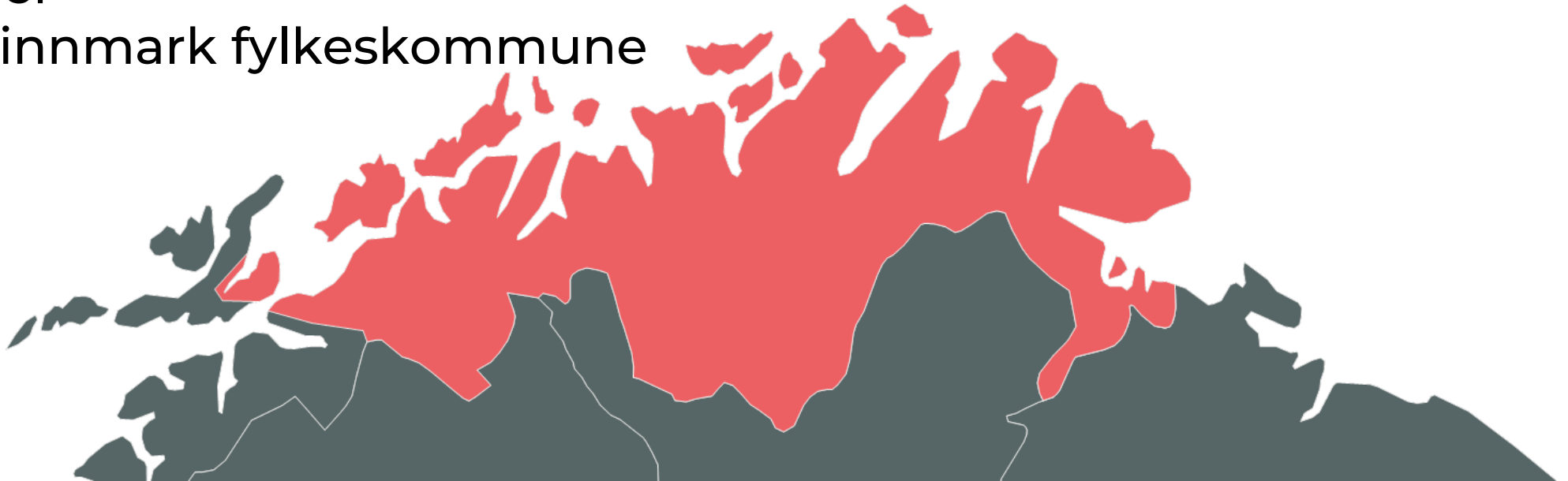




Troms og Finnmark fylkeskommune
Romssa ja Finnmarkku fylkkagielda
Tromssan ja Finmarkun fylkinkomuuni

ITS World Congress 2022

Espen Lauvlund Nilsen
Prosjektleder
Troms og Finnmark fylkeskommune



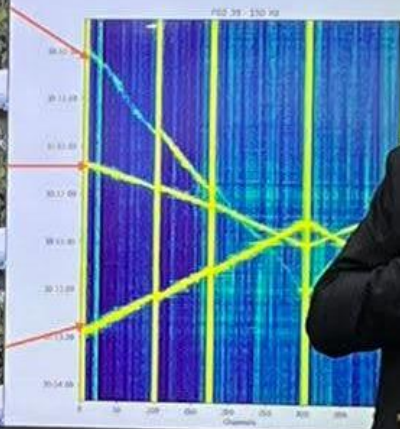
Innovation and ITS in arctic

Bjørn Holm-Varsti
Director of innovation
Troms and Finnmark County



Integrated acoustic sensing for detection

Ches
and



Accelerate the development of charging infrastructure in rural areas

Deployment of fast chargers at three locations where:

- There is no commercial basis
- There is a long distance to existing charging stations
- Co-location with other service offers is possible





Troms og Finnmark fylkeskommune
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Using distributed acoustic sensing for avalanche detection

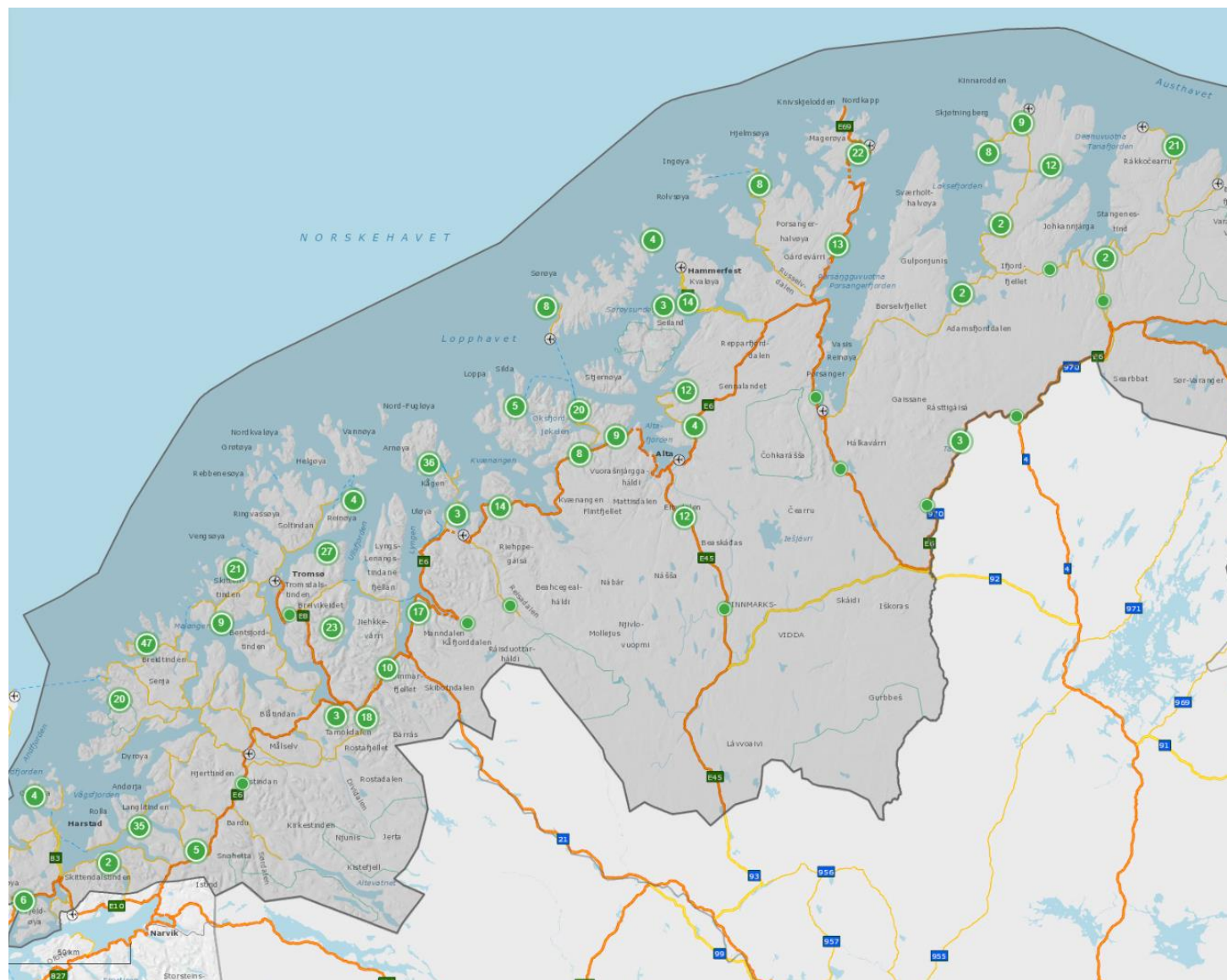
Espen Lauvlund Nilsen
Project Manager
Troms and Finnmark County



Avalanches points

Troms and Finnmark county

- 542 avalanches points along the roads in Troms and Finnmark
- Closing the roads in case of avalanches
- Huge challenge for people and businesses
 - Accessibility, perceived risk, economy, etc.

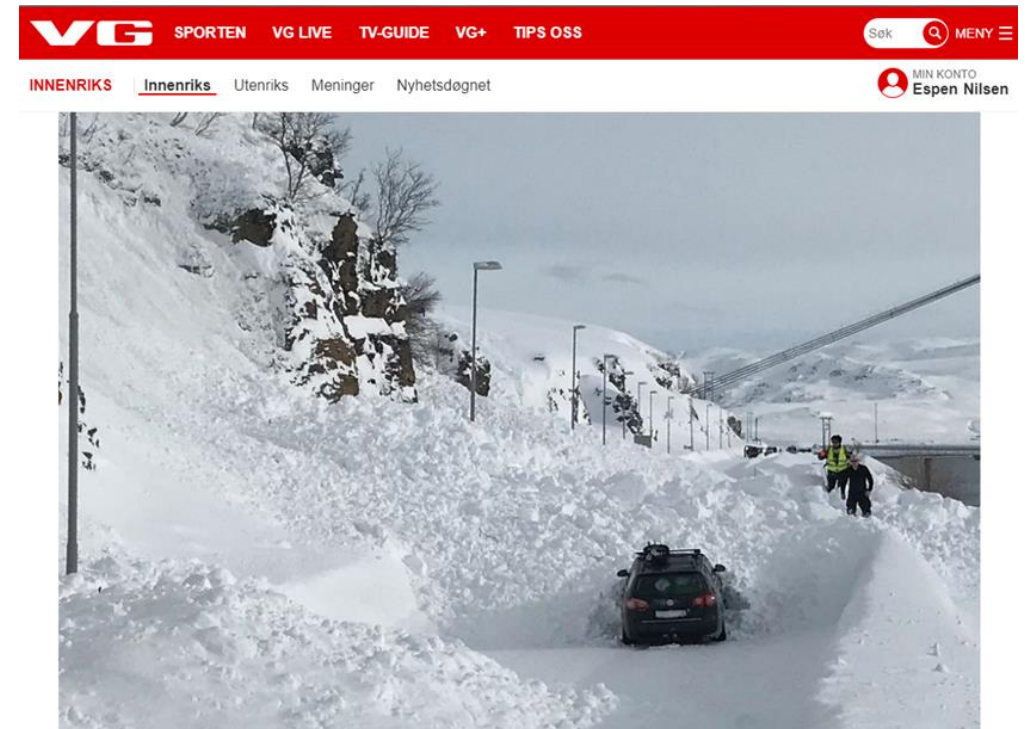




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Using distributed acoustic sensing for avalanche detection

- Vehicles in speed have small chances getting hit by a snow avalanche
- Neighbouring avalanches
- Detecting snow avalanches that blocks a road and if there are vehicles inside the area



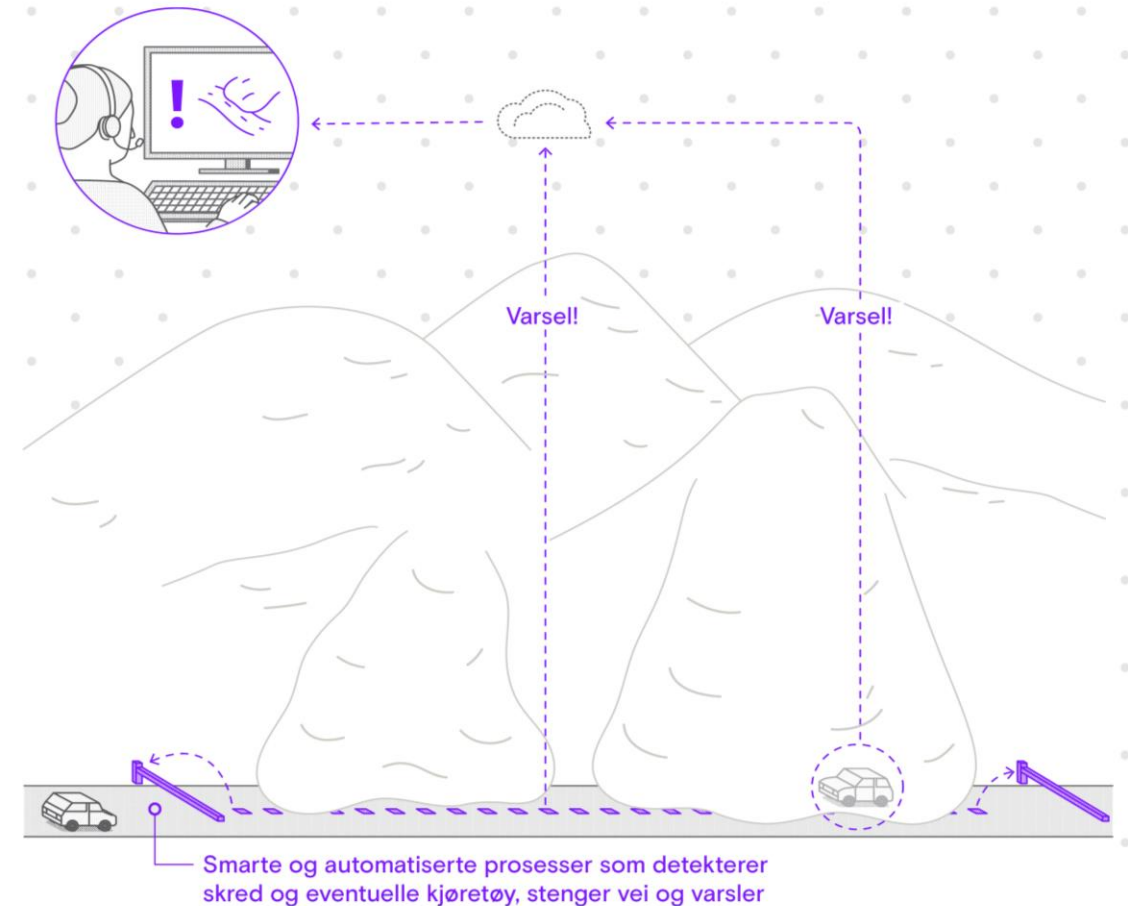
NESTEN TRUFFET: Bilen til Øyvind Berg ble stående mellom to snøskred fredag ettermiddag. Foto: Tore Nilsen / NTB scanpix

Øyvind Berg og familien ble fanget mellom to snøskred



Using distributed acoustic sensing for avalanche detection

- Requirements
 - Detecting snow avalanches that blocks a road and if there are vehicles inside the area
 - Notify the TMC
- Wishlist
 - Edge computing
 - No/minor installations inside the avalanche area
- Funding from Innovation Norway for an innovative procurement
- Innovation partnership with Norconsult, NORSAR and Alcatel Submarine Network

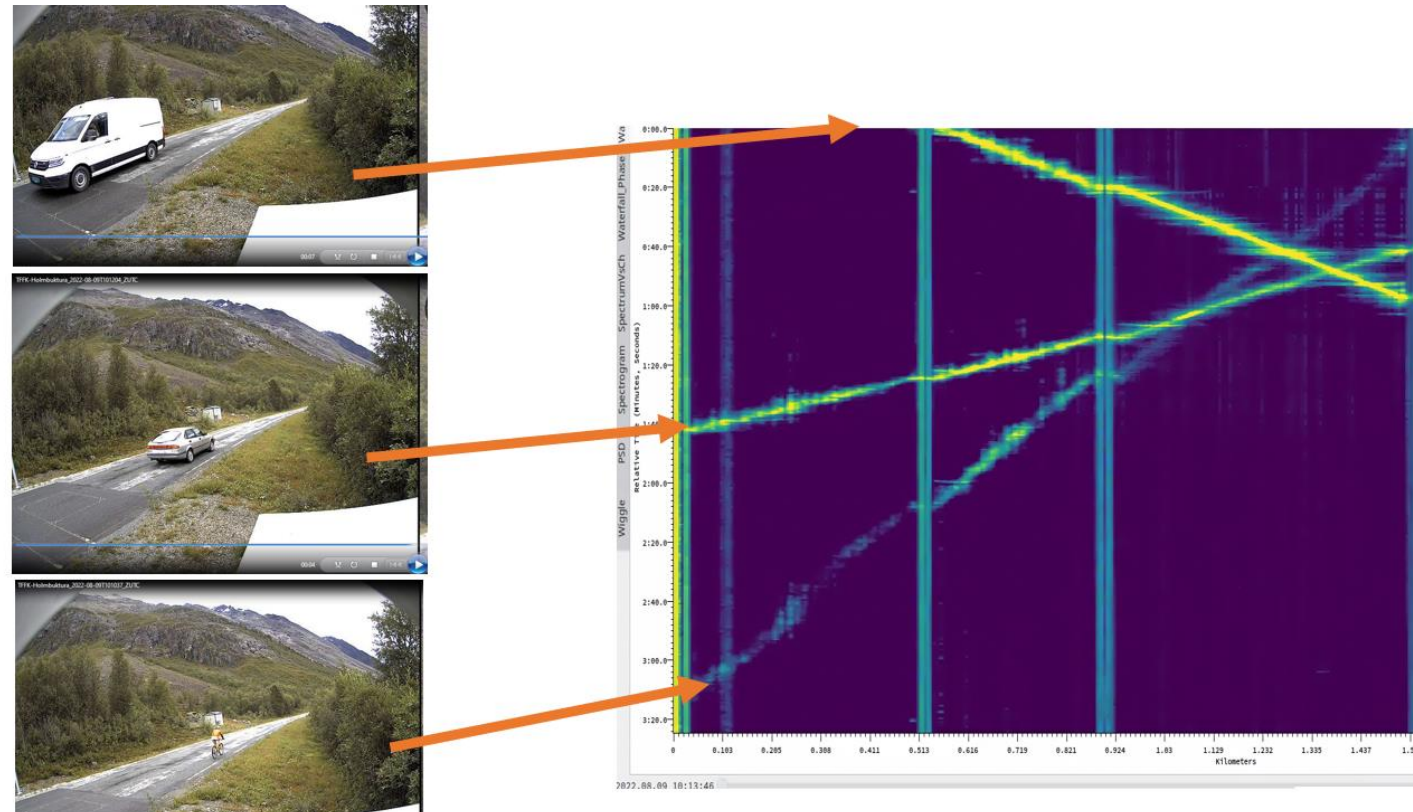
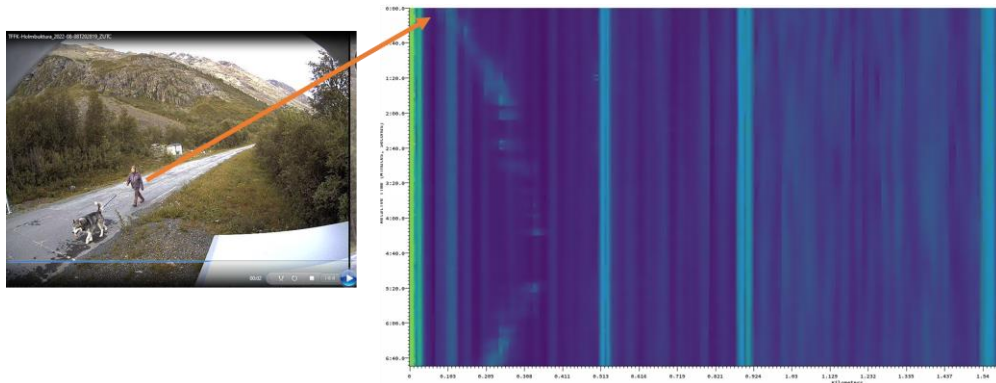






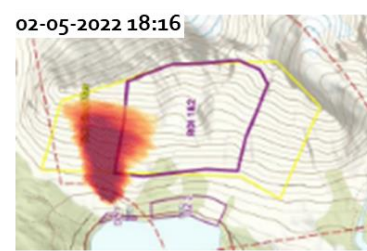
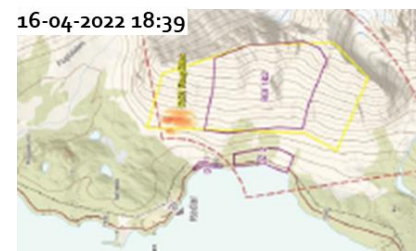
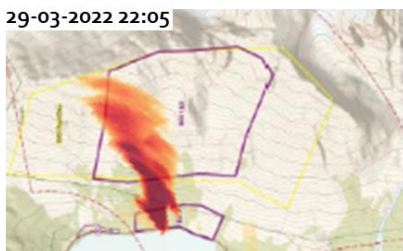
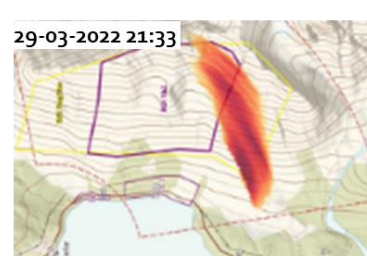
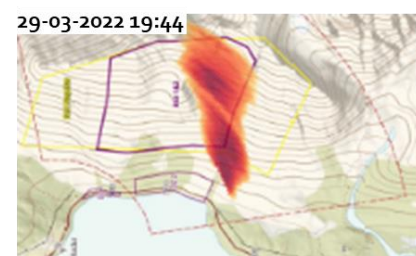
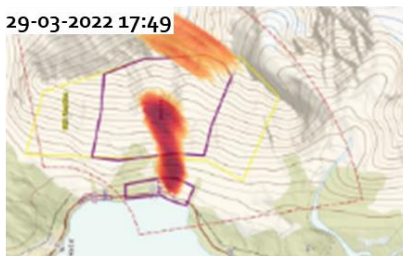
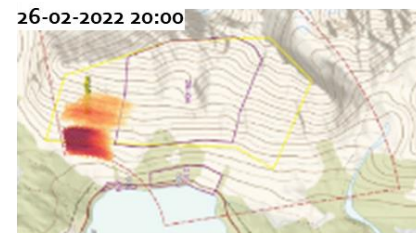
Using distributed acoustic sensing for avalanche detection

- Very few larger avalanches last winter
- No problem detecting and recognizing vehicles



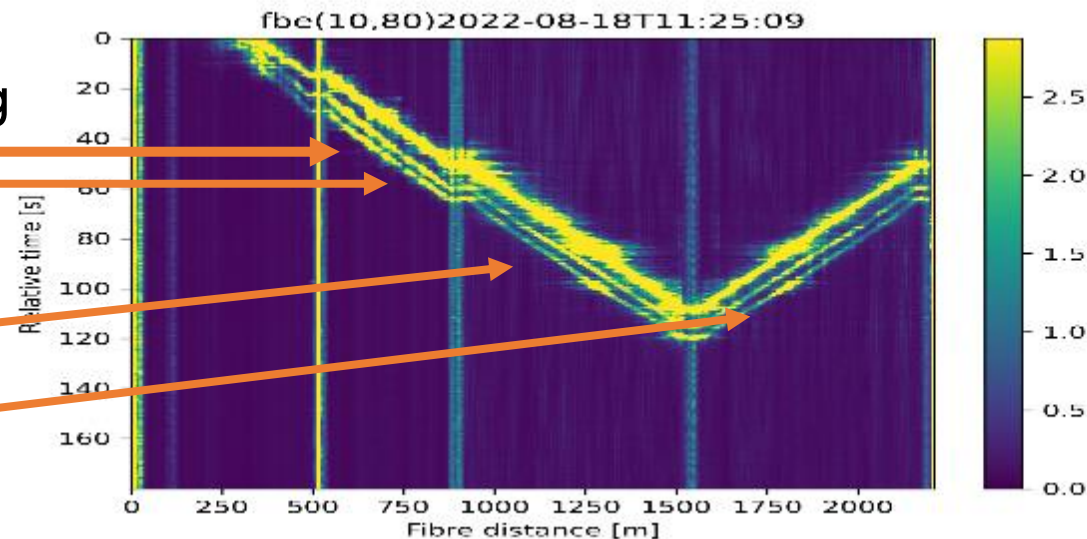
Using distributed acoustic sensing for avalanche detection

- 43 registered avalanches
- Can automatically detect the eight largest



Using distributed acoustic sensing for avalanche detection

- 43 registered avalanches
- Can automatically detect the eight largest
- Truck with two cars following
- Different ways of laying the fibre





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Thanks for your attention!



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