

# Appearance of PGFs in Finland – case Lauhavuori

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Northern Fennoscandia has experienced late- and postglacial fault (PGF) activity and high-magnitude seismicity attributable to lithospheric plate stresses and glacio-isostatic rebound. During the last decades, PGFs have been found and described in northern Fennoscandia, the first fault scarps being discovered in western Finnish Lapland in the 1960s. LiDAR-based digital elevation models (DEMs) have recently provided a new and accurate remote sensing mapping methodology for systematic screening and detection of geological and geomorphological features. It allows the rapid and low-cost mapping of late- or post-glacial faults and, for instance, mapping of landslides from areas where they have not previously been recognized (Palmu et al., 2015).

In Fennoscandia, most PGFs have been found in Finnish Lapland and Norrbotten in Sweden. Recently, new potential PGF systems were discovered in Lauhavuori, western Finland (Palmu et al., 2015), and in Bollnäs, central Sweden (Mikko et al., 2015), both representing the southernmost locations of PGFs in Fennoscandia.

This poster describes the preliminary findings of the proposed Lauhavuori PGF. The geomorphological features extracted from the LiDAR DEM include the ramp height of the fault, which is typically 1 meter, with a maximum value of 2 meters. Shoreline displacement features, used in the preliminary age determination of the proposed PGF give an age of 9300 cal yr, based on Salomaa (1982) and Ojala et al (2013).

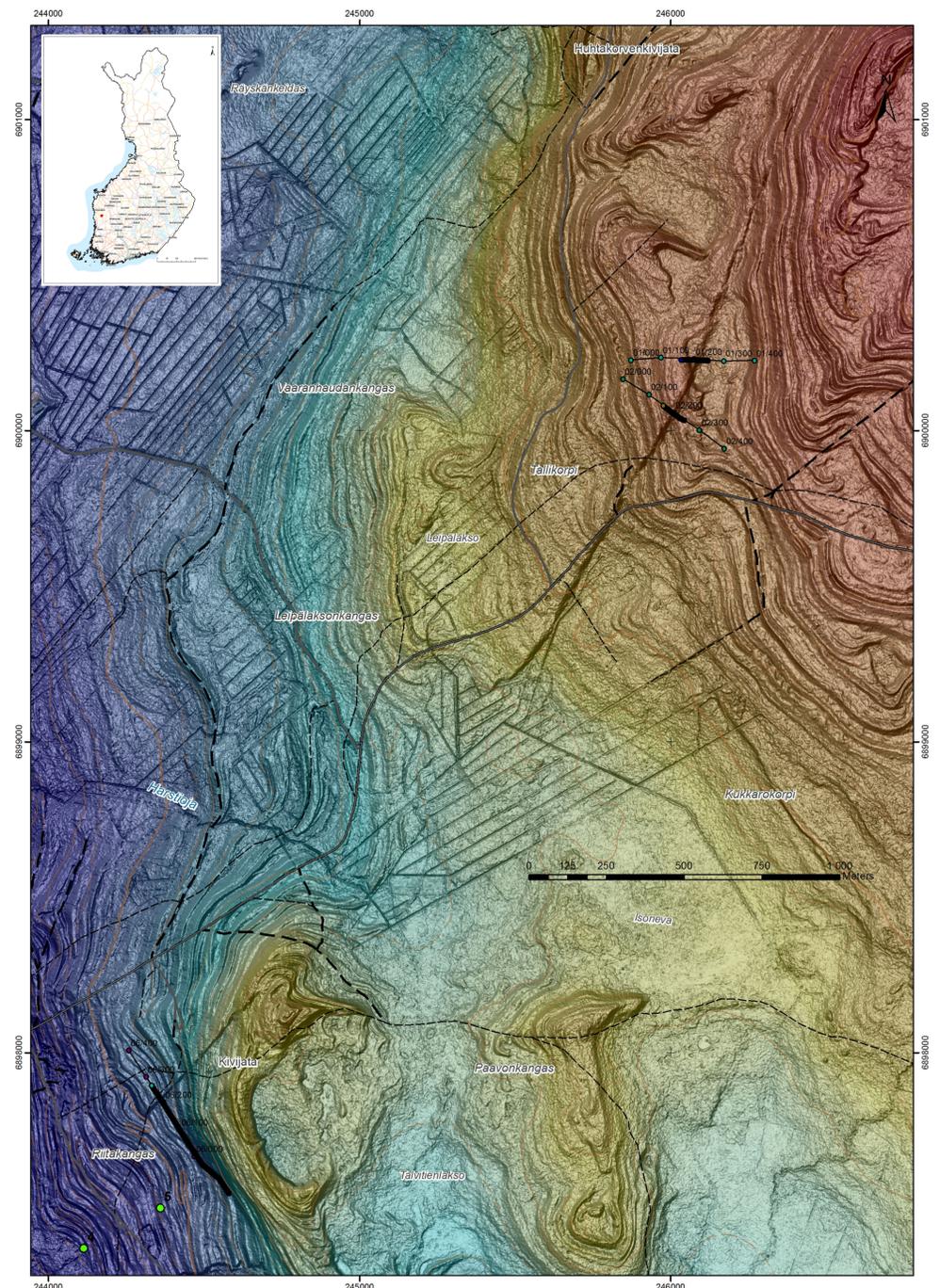
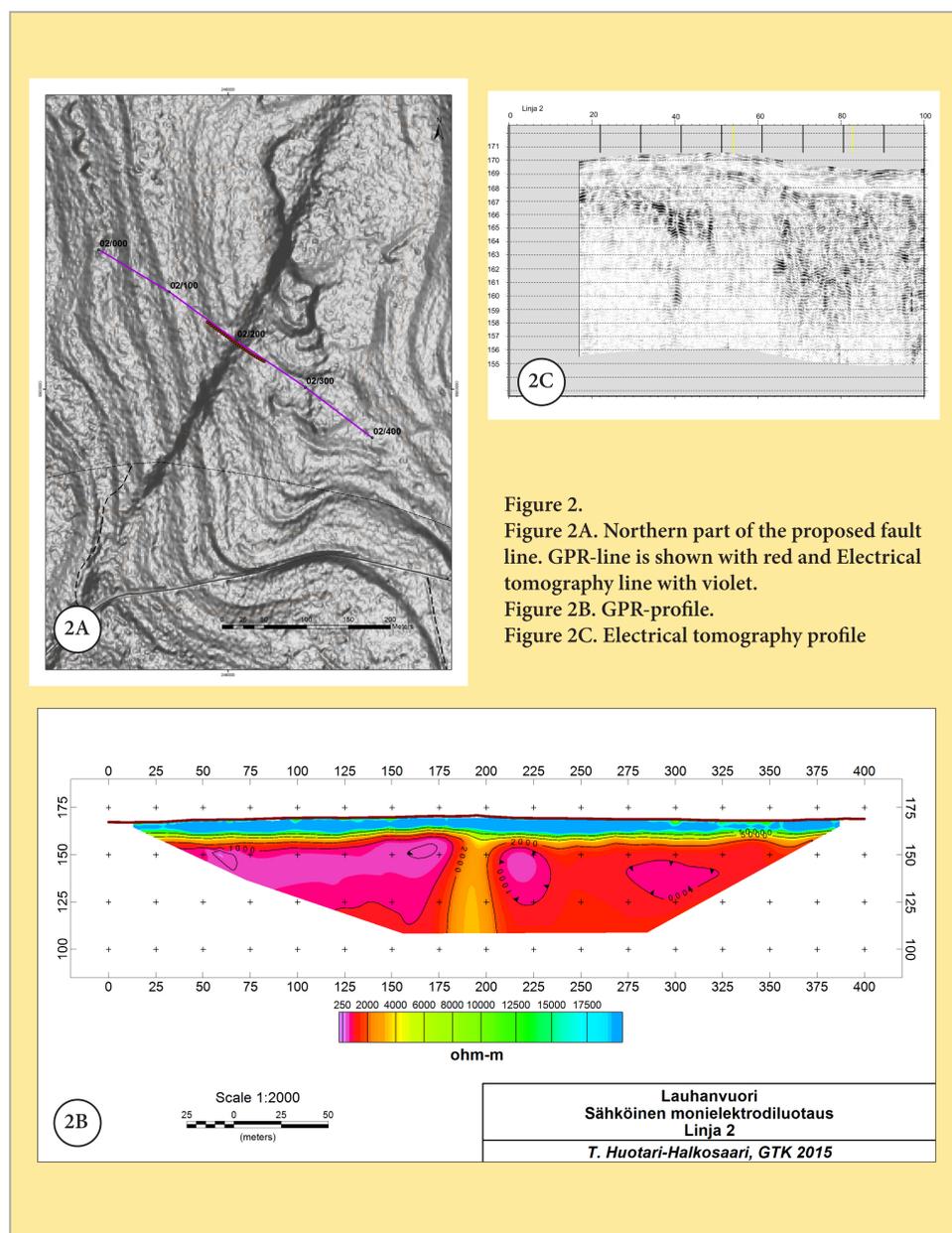


Figure 1. Lauhavuori fault line. Lauhavuori region and the proposed fault line (main part). LiDAR point cloud data and topography map data Copyright Maanmittauslaitos. LiDAR data processing Copyright Geologian tutkimuskeskus.

## References

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