Aalto University
School of Engineering

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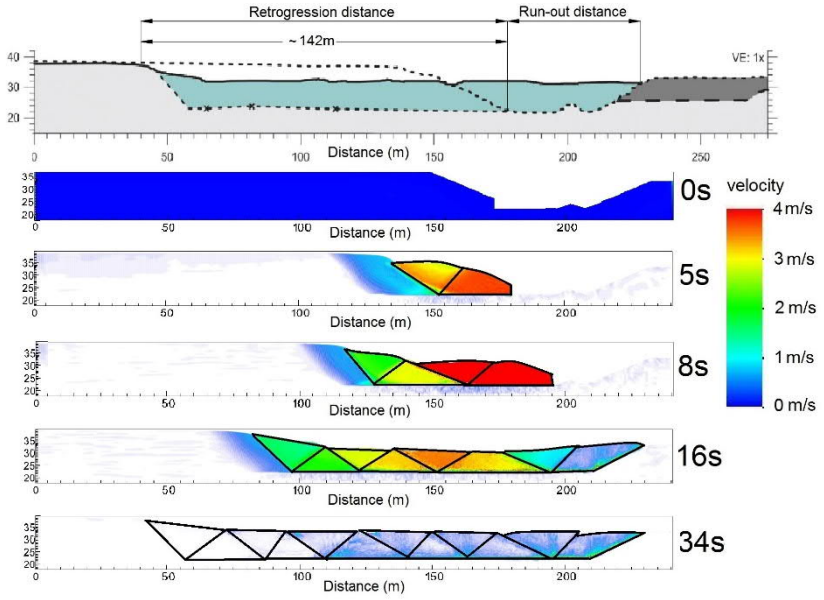
Towards accuracy and stability of landslide modelling

Title of the dissertation	Material Point Method: algorithm development and landslide modelling
Contents of the dissertation	Landslides, slope failures cause loss of lives and damages the infrastructure all around the world. In general, conventional methods such as Finite Element Method can be used to calculate the probability of the slope failures. On the other hand, Material Point Method can be used to calculate not only the probability but also the consequences of the slope failures. Understanding failure consequences will support geotechnical engineers to carry out more efficiently the slope risk assessment and mitigation. The state-of-the-art of this work is to improve the accuracy and stability of the Material Point Method to make it more attractive and reliable for landslide modelling. The lectio covers basic introduction of the Material Point Method with applications and the enhancement of the algorithm to improve accuracy and stability. Everyone is welcomed to the defence since no knowledge of advanced numerical methods is required.



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