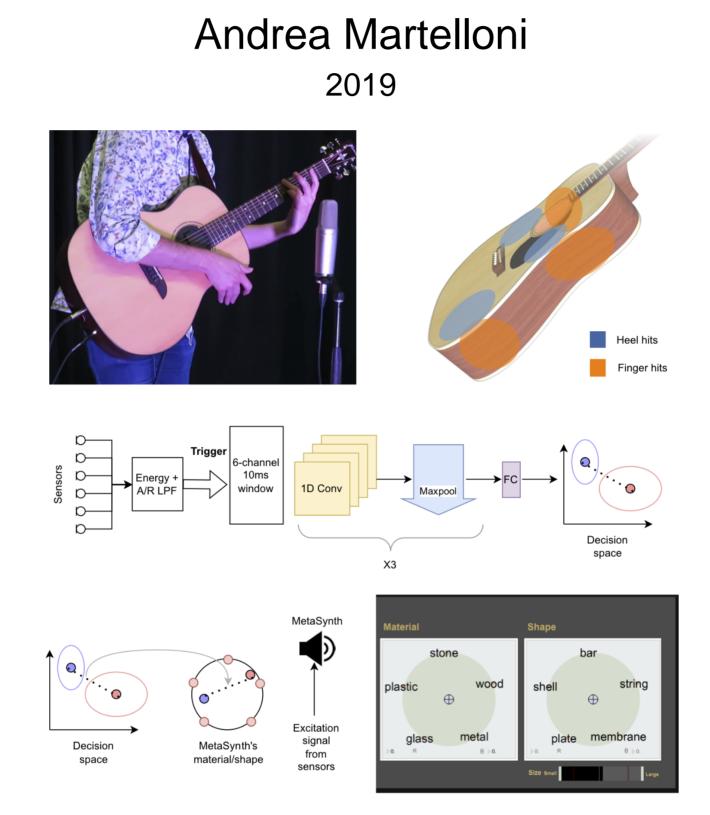
## The HITar, an augmented guitar for percussive fingerstyle with DNN body hit description



## **Finding**

We built an acoustic guitar prototype that uses a soft classifier to control the parameter space of a synthesis engine in real time. The embeddings (last layer before the output layer) are regularised so that they act as a low-dimensional latent space, providing a deeper description than the output layer of the classifier. System latency is ~13 ms.

## Question

Usability evaluation: How do players behave with it? Does the resynthesised sound match the expectation of the player? Does the richer representation carry the subtle differences across hits normally present in expressive playing?