

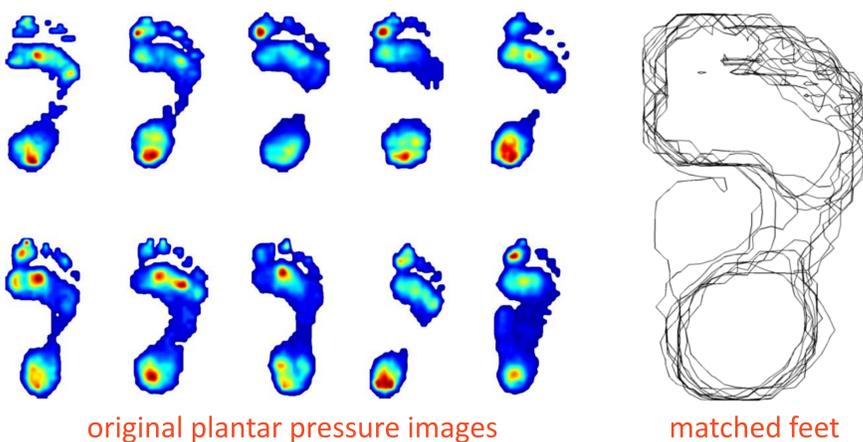
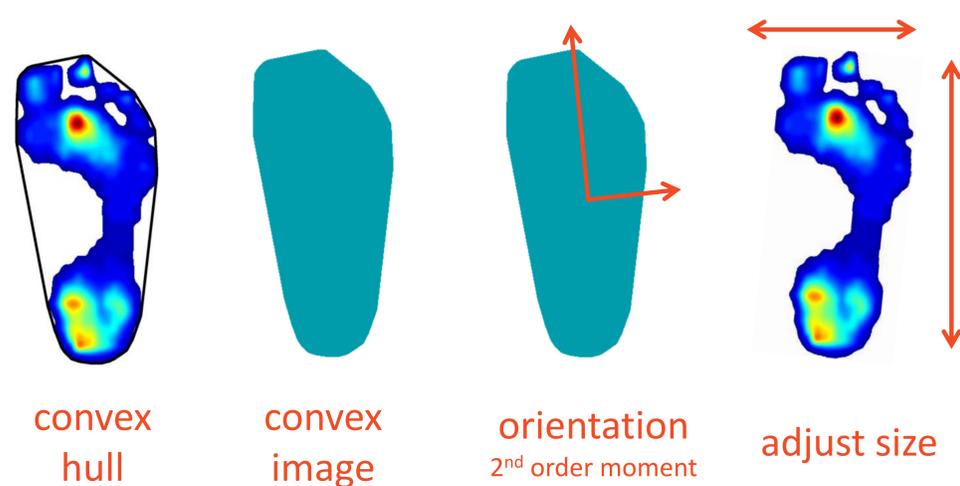
EIGENFOOT DECOMPOSITION

Feature prediction of two modalities

The registration of plantar pressure images is a widely used technique to support human gait analysis. Using a pressure plate is cheaper and less time consuming compared to other gait analysis techniques such as 3D marker registration. In this study we investi-

gate if automatically generated plantar pressure features using PCA hold the same or more information compared to traditional pressure features (e.g. peak pressures in specific foot segments) and marker based features.

WHICH NORMALIZATION

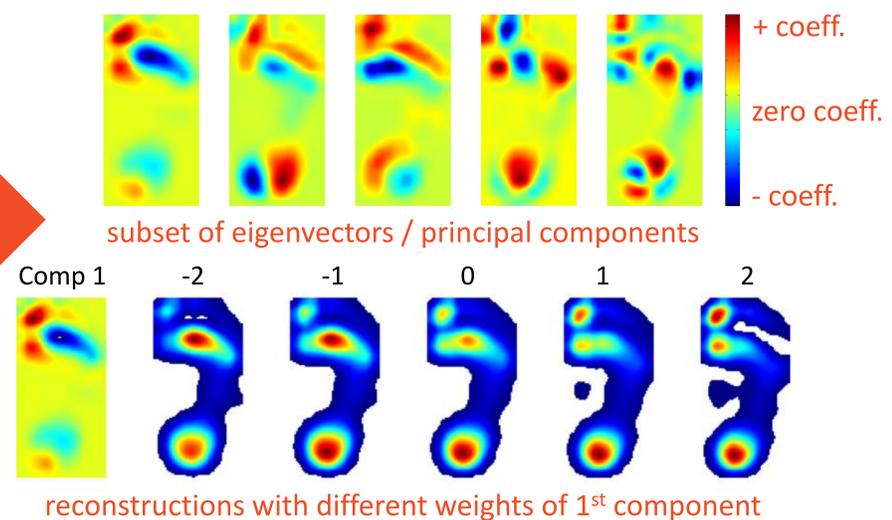


$$y = A(x - \mu_x)$$

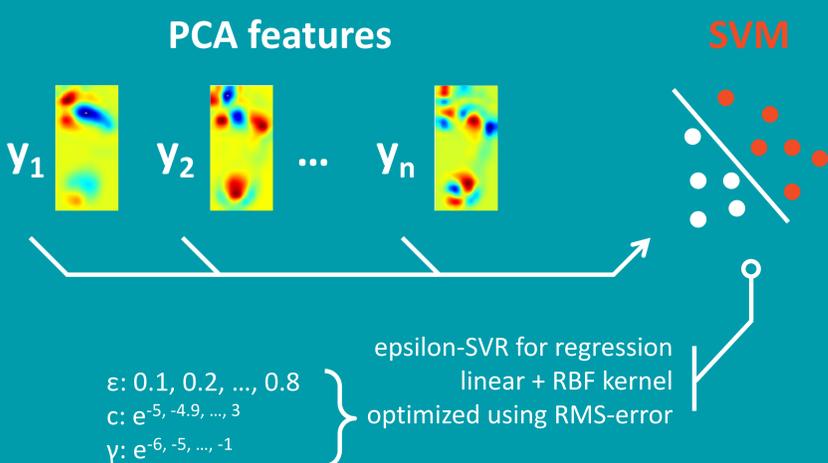
WHICH SUBJECTS PARTICIPATED



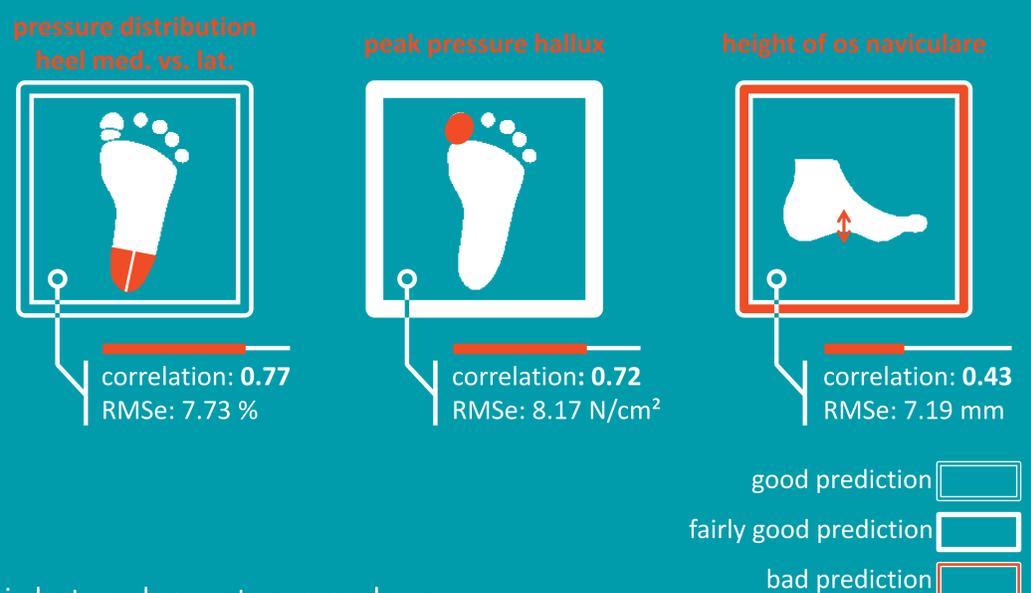
PRINCIPAL COMPONENT ANALYSIS



PREDICTION OF FEATURES



Traditional features



DISCUSSION Using the PCA features, some patients-specific information is lost, such as extreme peak pressure values. On the other hand, this can also be an advantage as it is less prone to erroneous measurements. Furthermore, latent information that is not expressed in traditional features can be present in the PCA-features.

