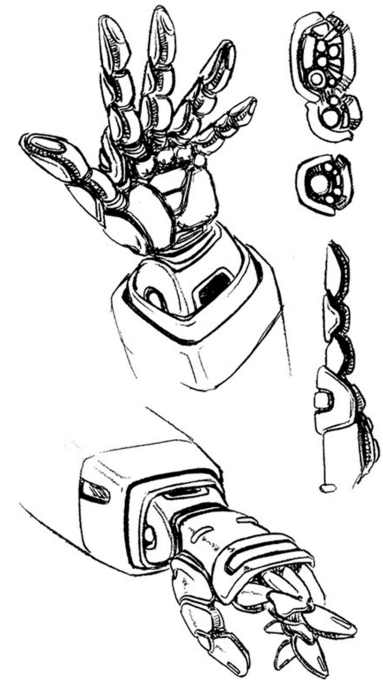
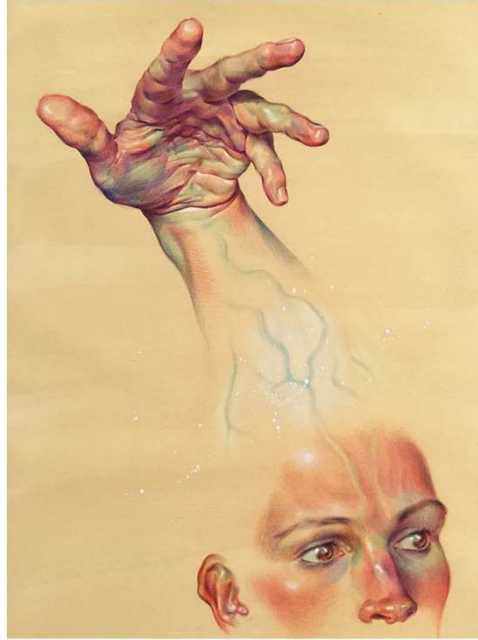


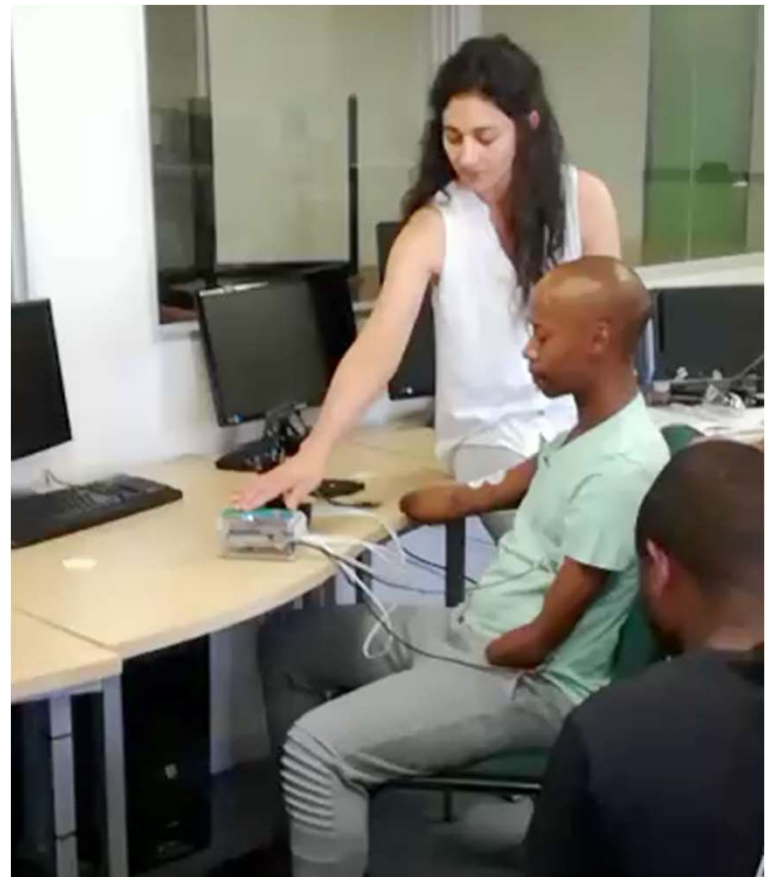
# Digitising the Human Hand

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WITS

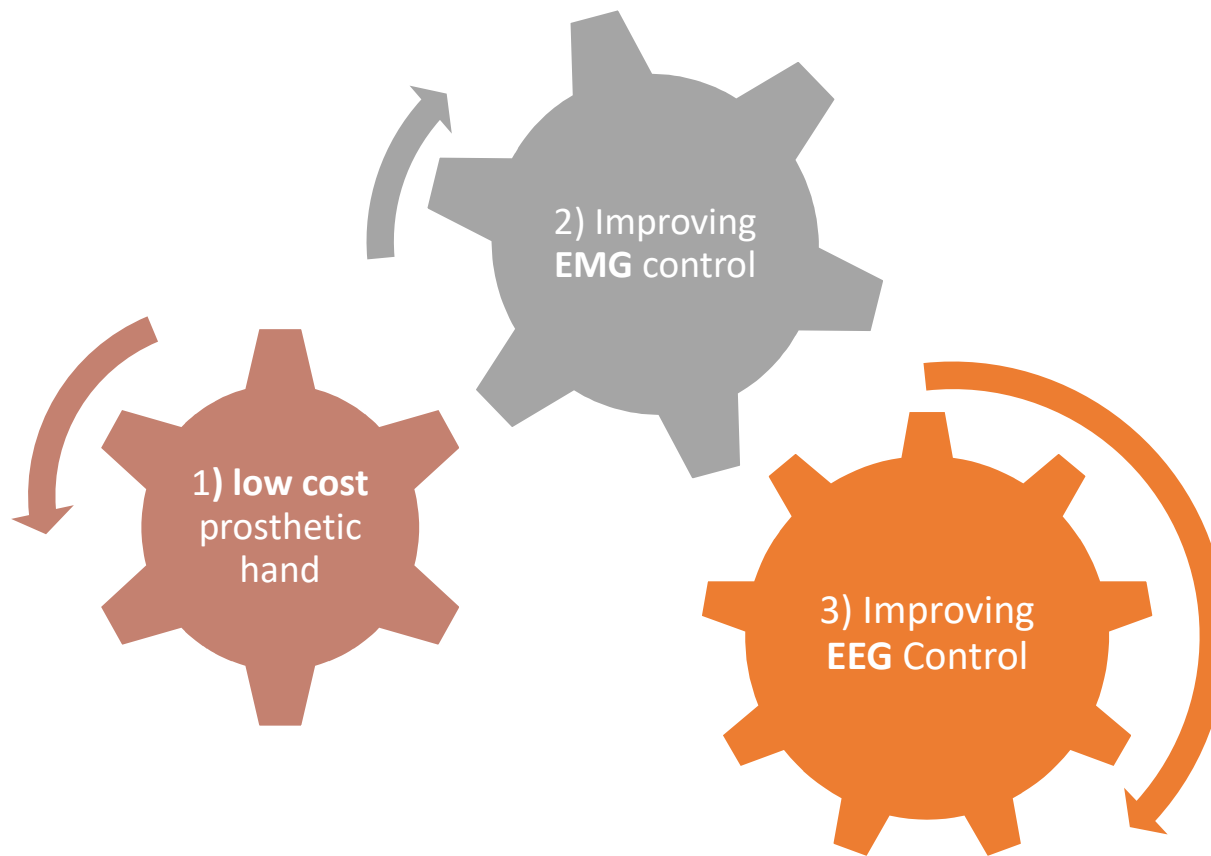
# The Complex Human Hand



# Purpose of the Project



# Outline of our Research



# The Beginning

Mass Flexion



Mass Extension



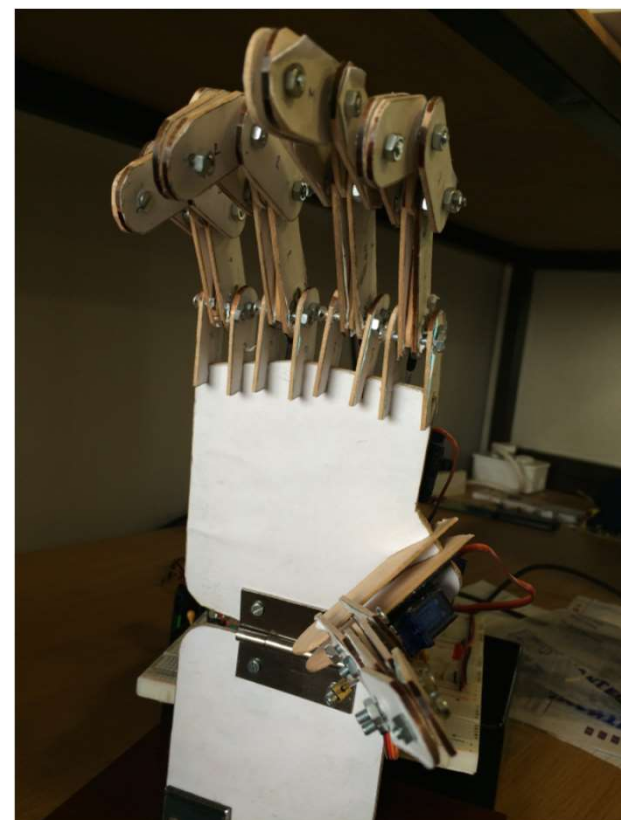
Tripod Pinch



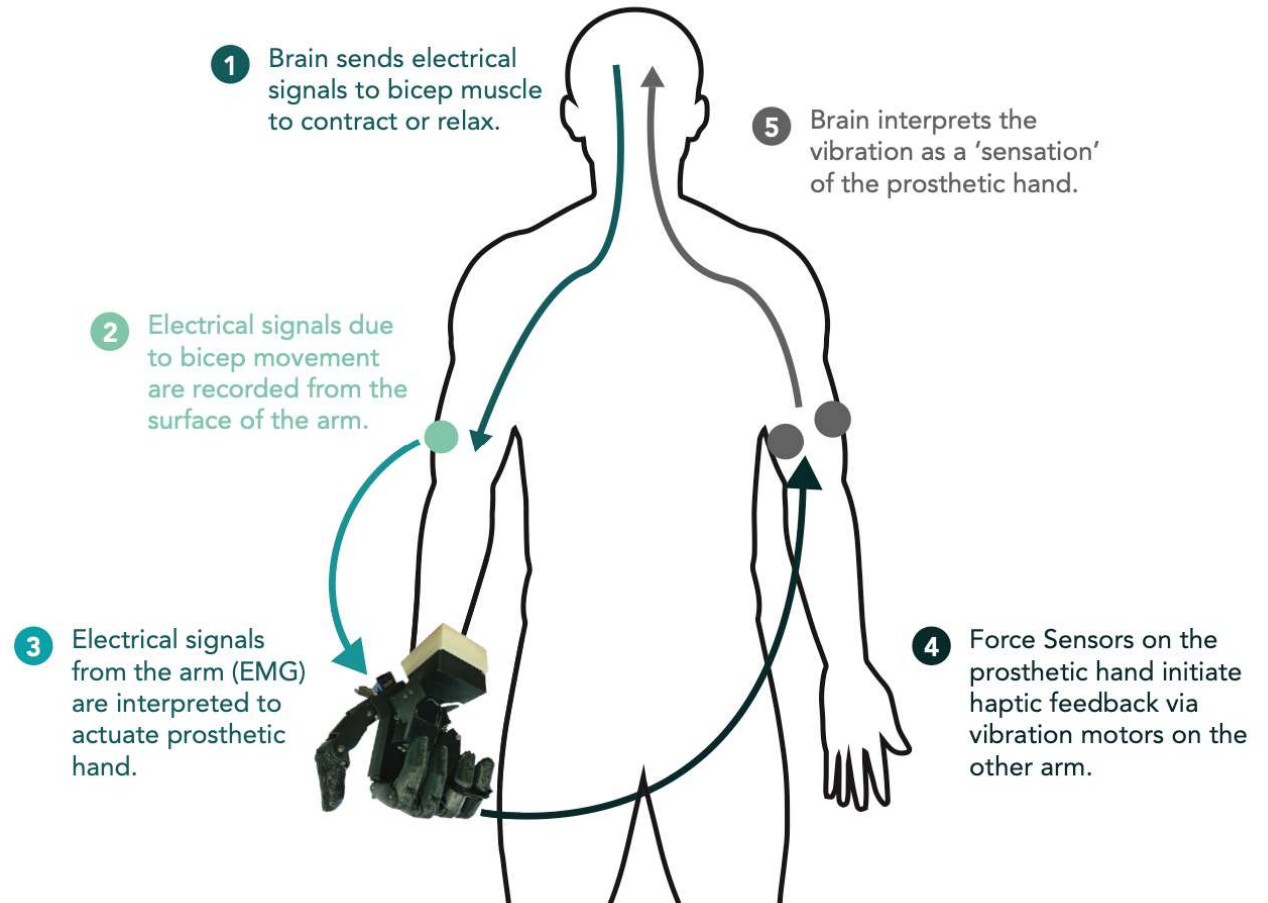
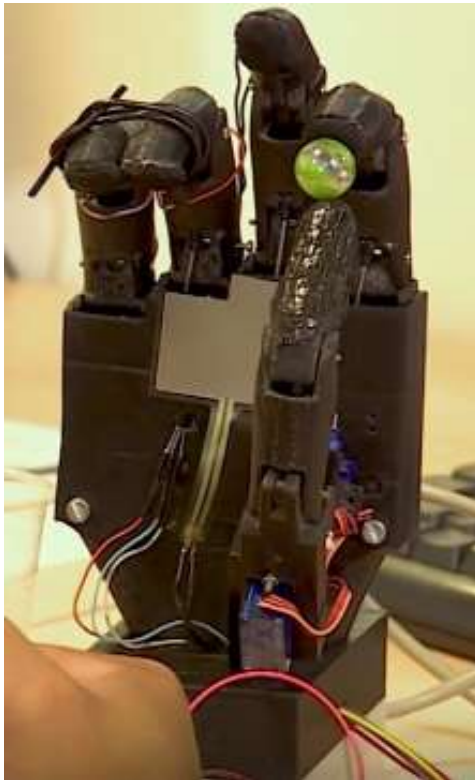
Wrist Extension



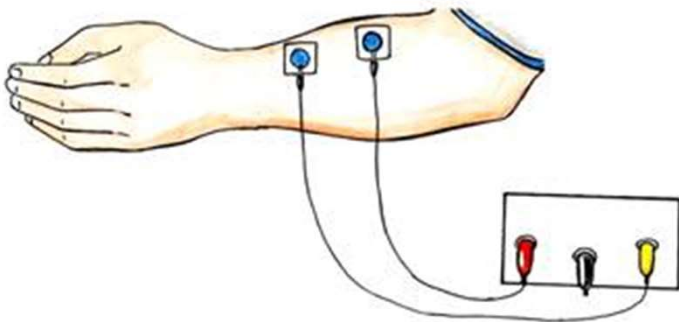
Wrist Flexion



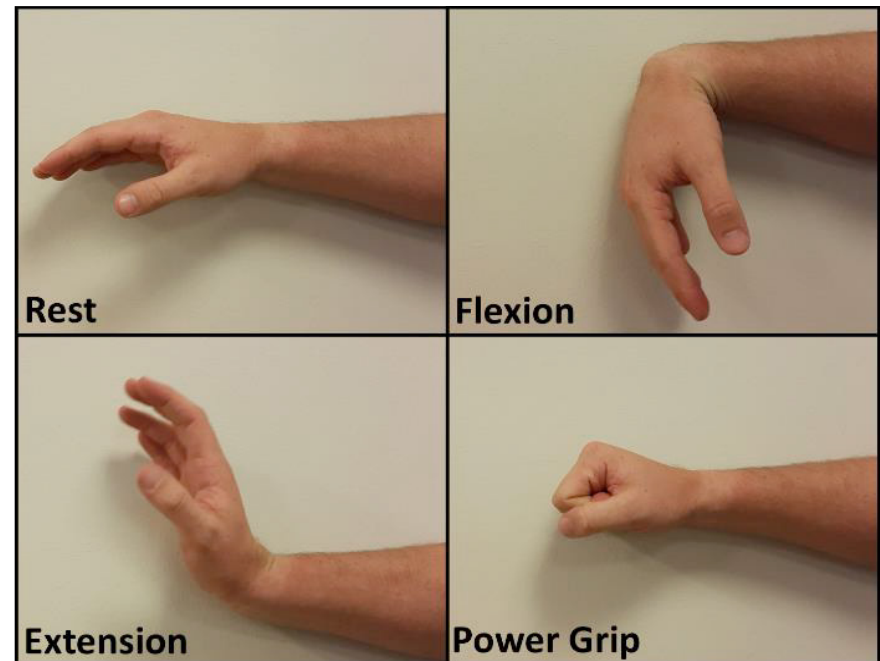
# The Current Prototype



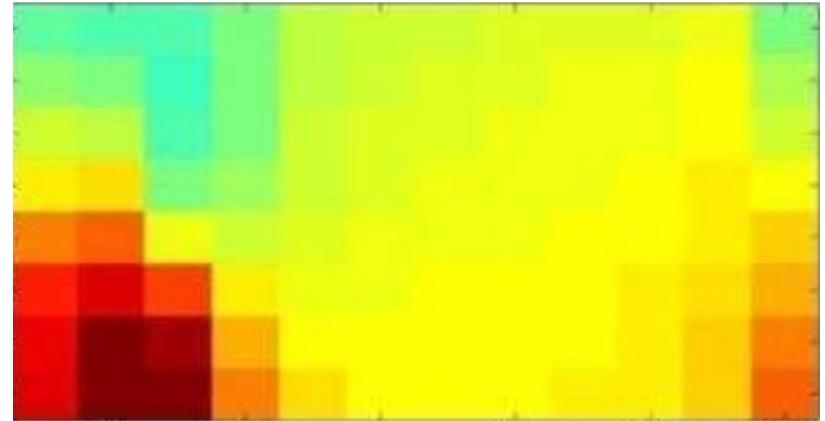
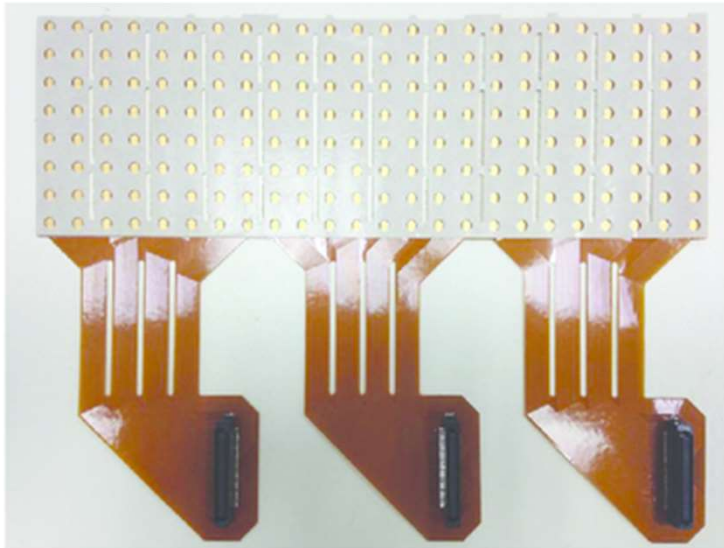
# Increasing Dexterity



Classified 4 key movements  
from 2 electrodes

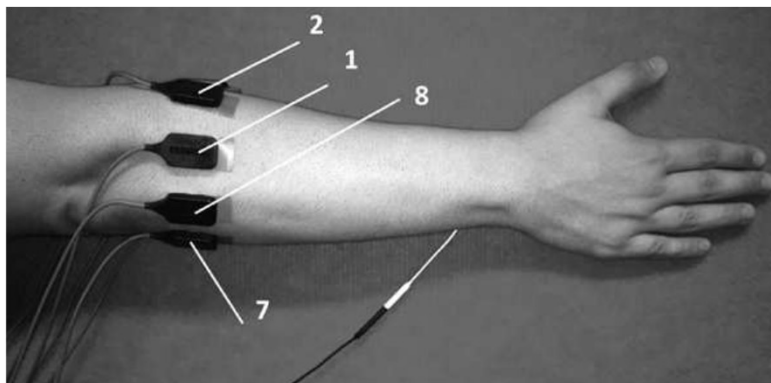
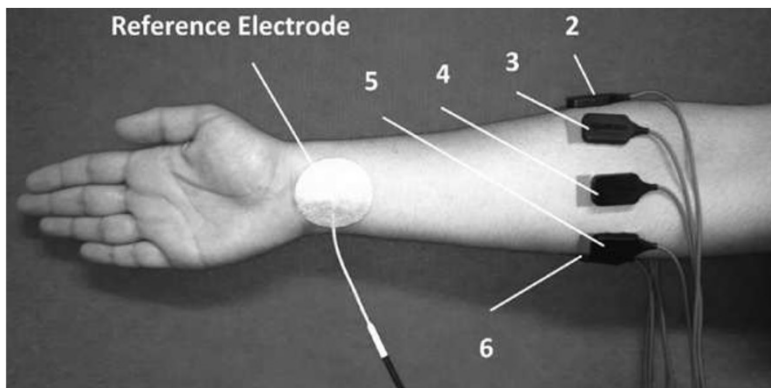


# Increasing Dexterity



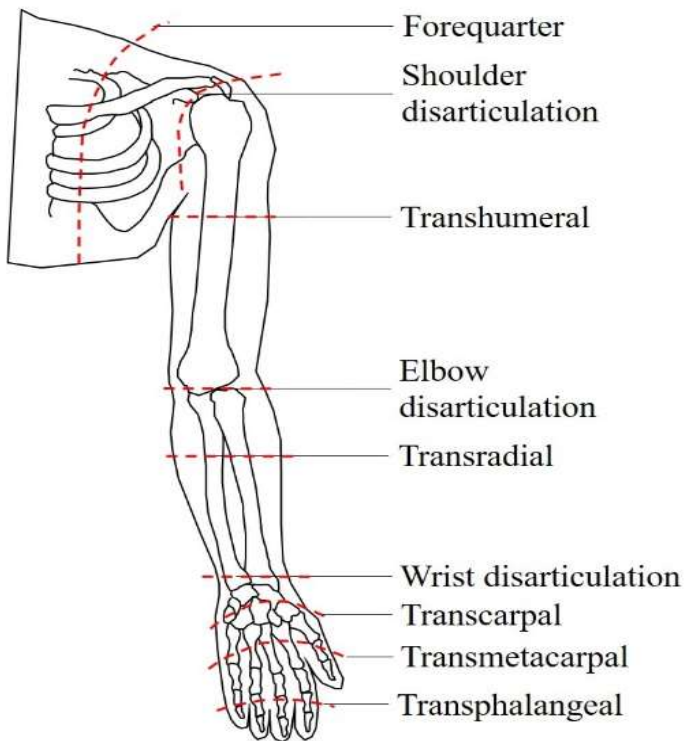
128 electrodes translated to a colour image.  
Convolutional neural network used to analyze features

# Optimising Electrode Placement

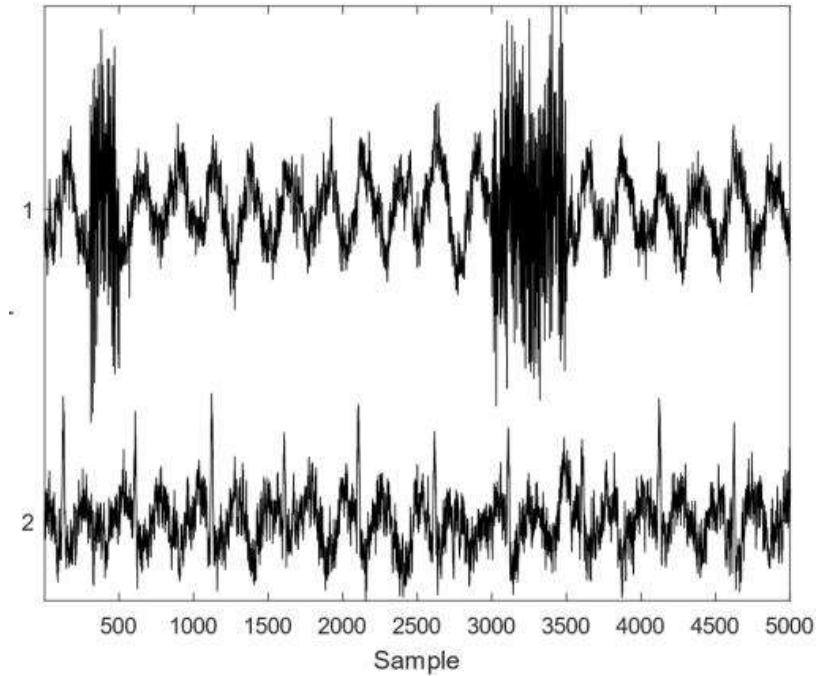
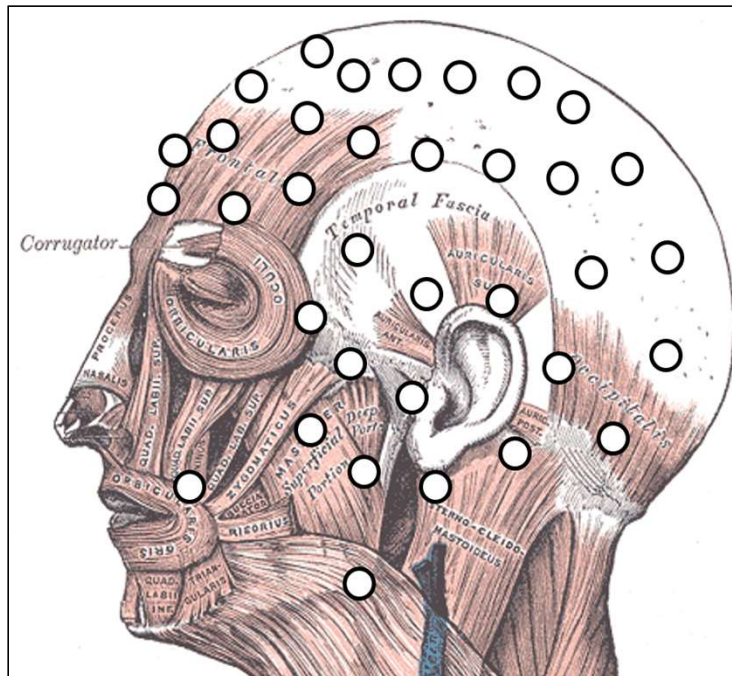


- 8 electrodes reduced to combination of 2, or 4 electrodes
- For 15 hand gestures

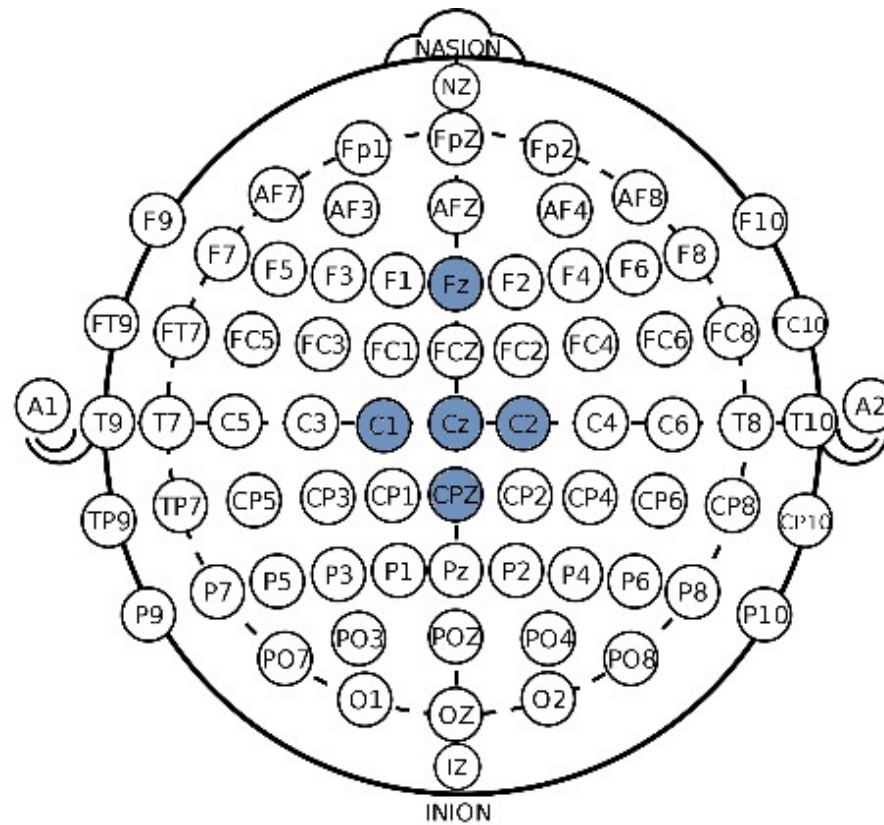
# Considering Extreme Amputations



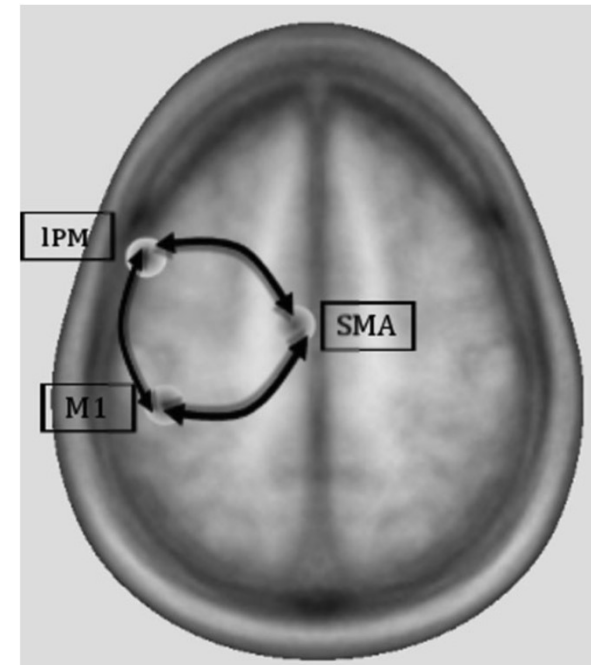
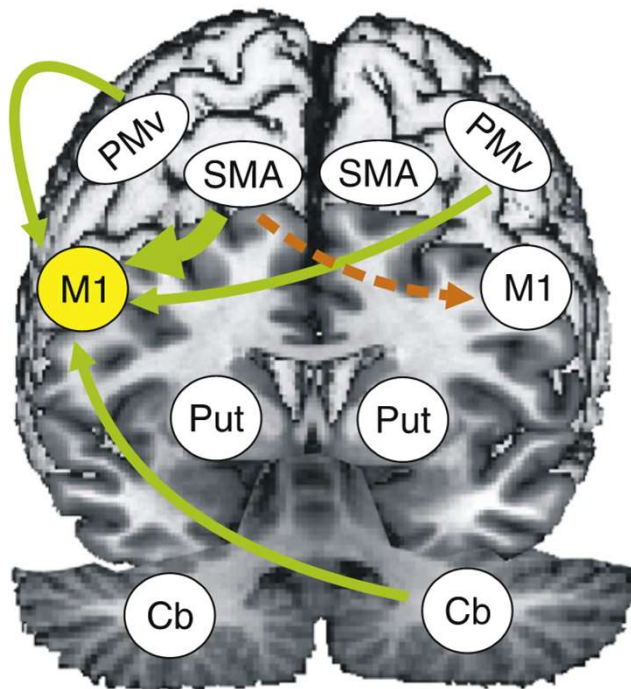
# Improving EEG Analysis



# Optimising Electrode Placement



# Modelling Neural Hand Control



# Summary

