

FIGURE 1 STORY

Remove photos

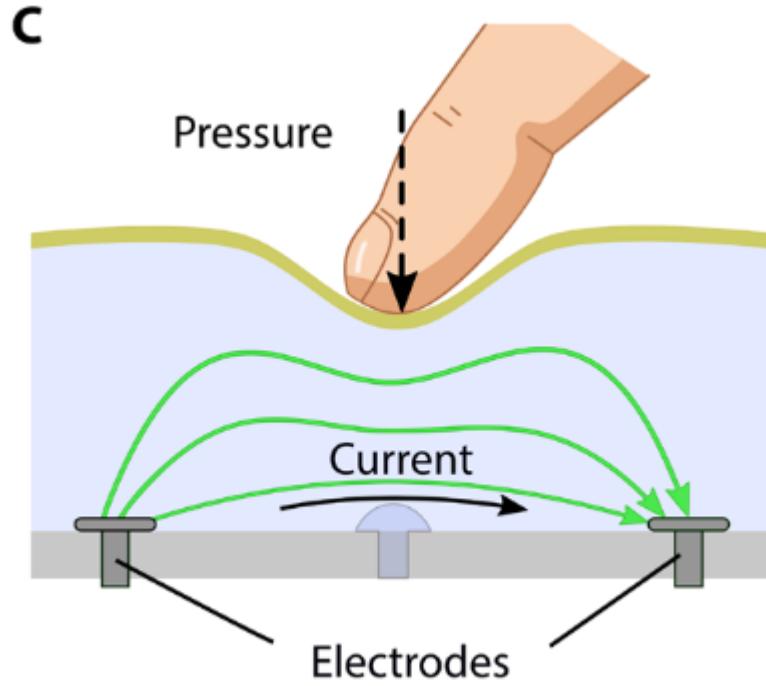
Make novelty clearer

Funneling information at the brain level, rather than the sensor level

How do I then design my system to get the most useful information?

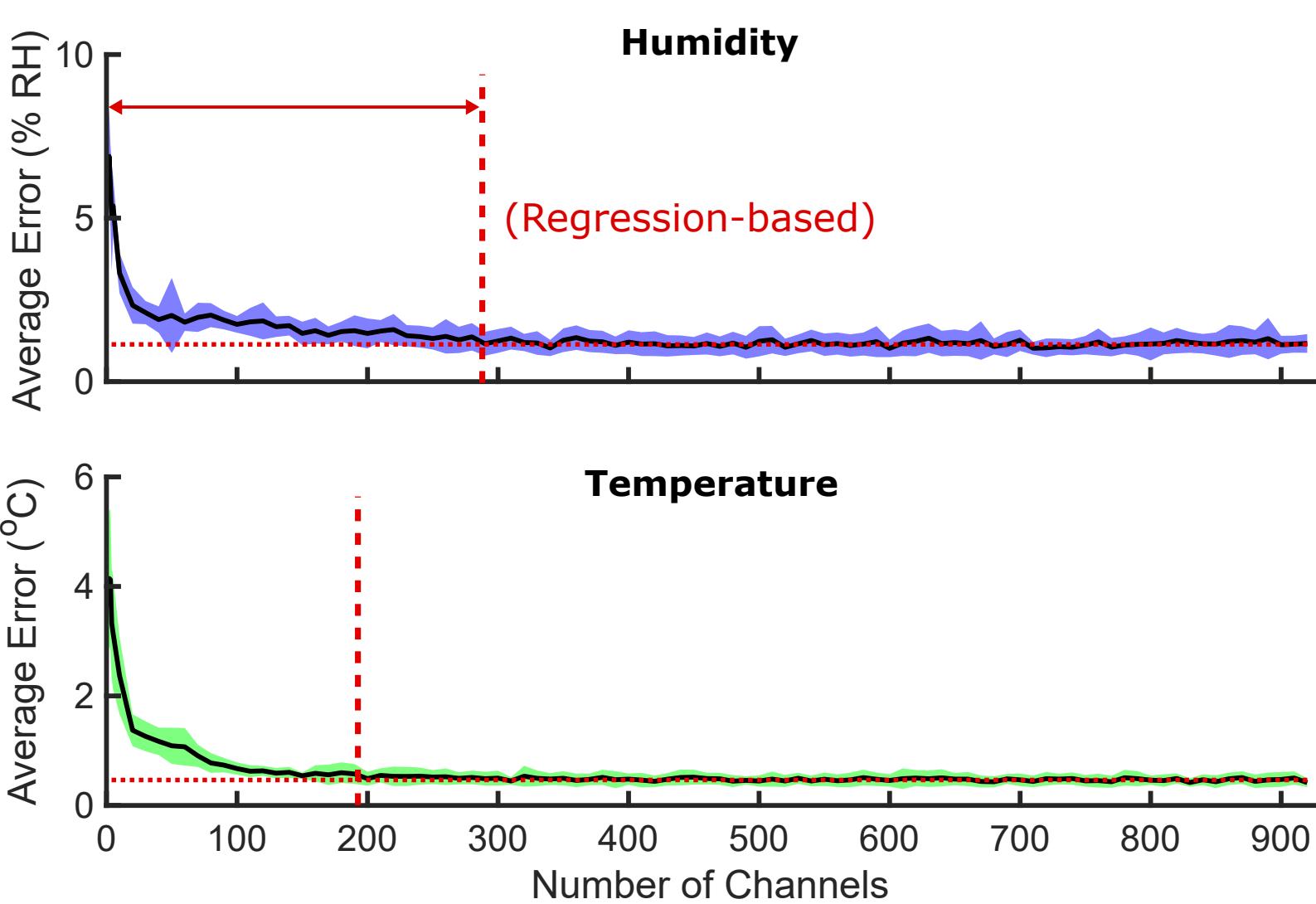
Show effect of different modalities

Field-based visualisations
Technical illustrator next steps



Hydrogels as an enabling platform for multimodality

INFORMATION CONTENT



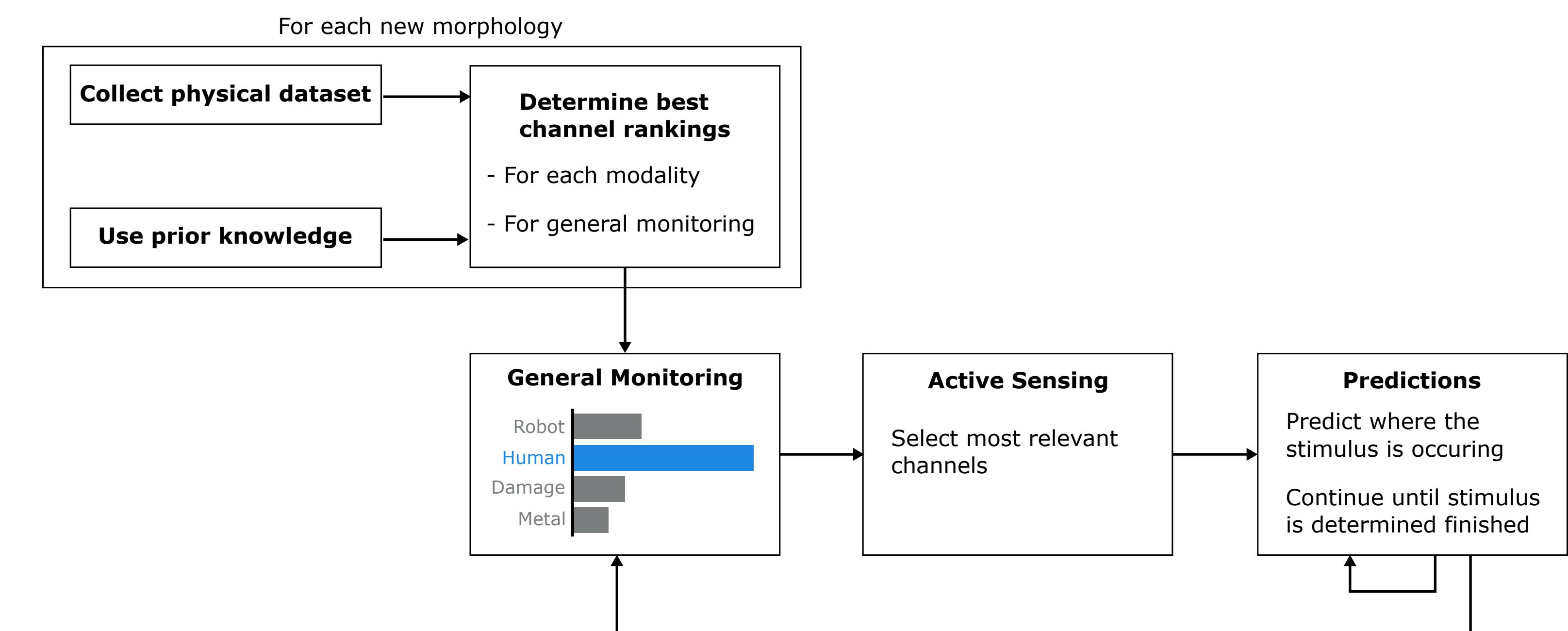
Expand on this figure

How do data-driven channel selections compare to traditional analytic selections?

What is the best way to rank channels?

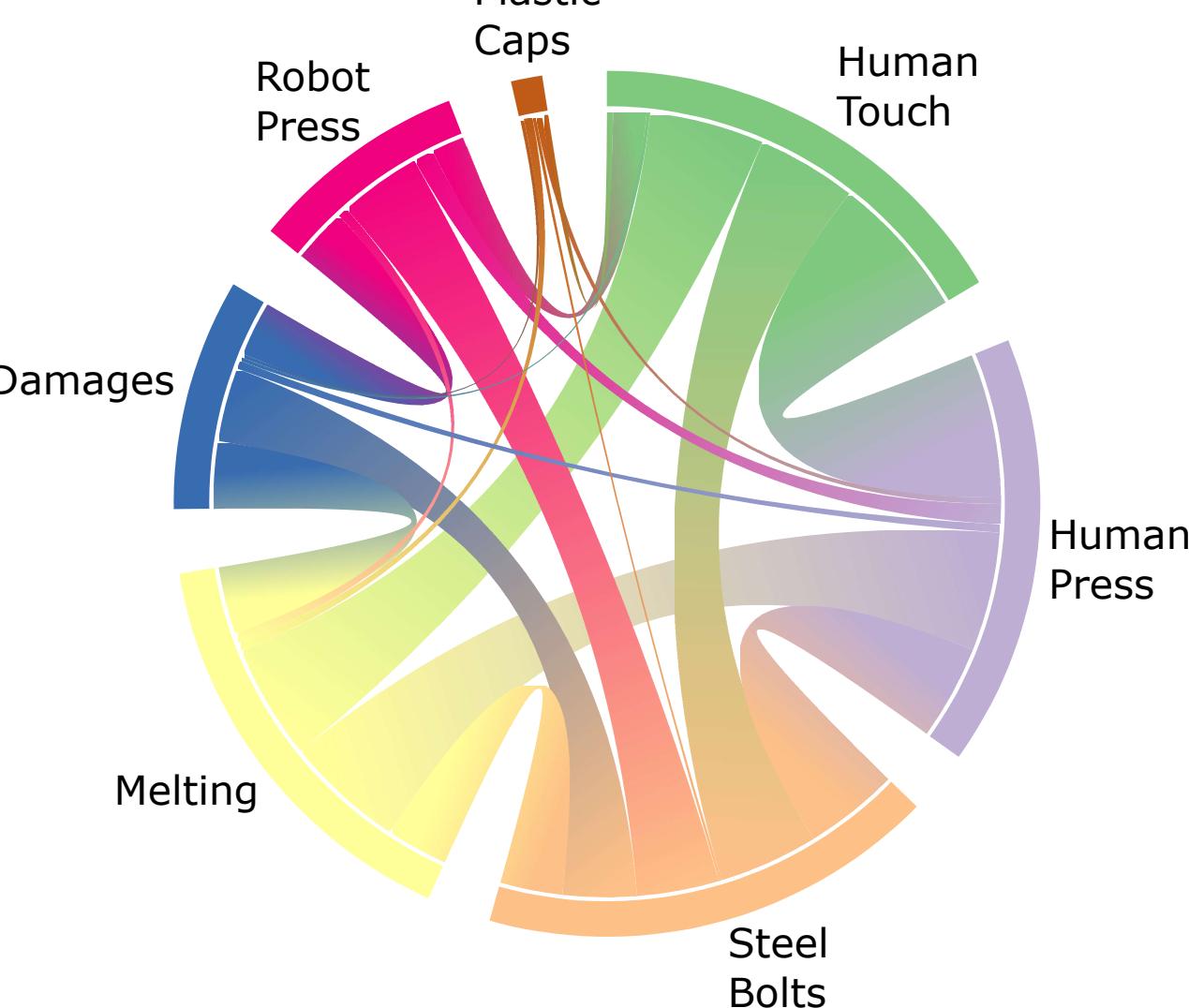
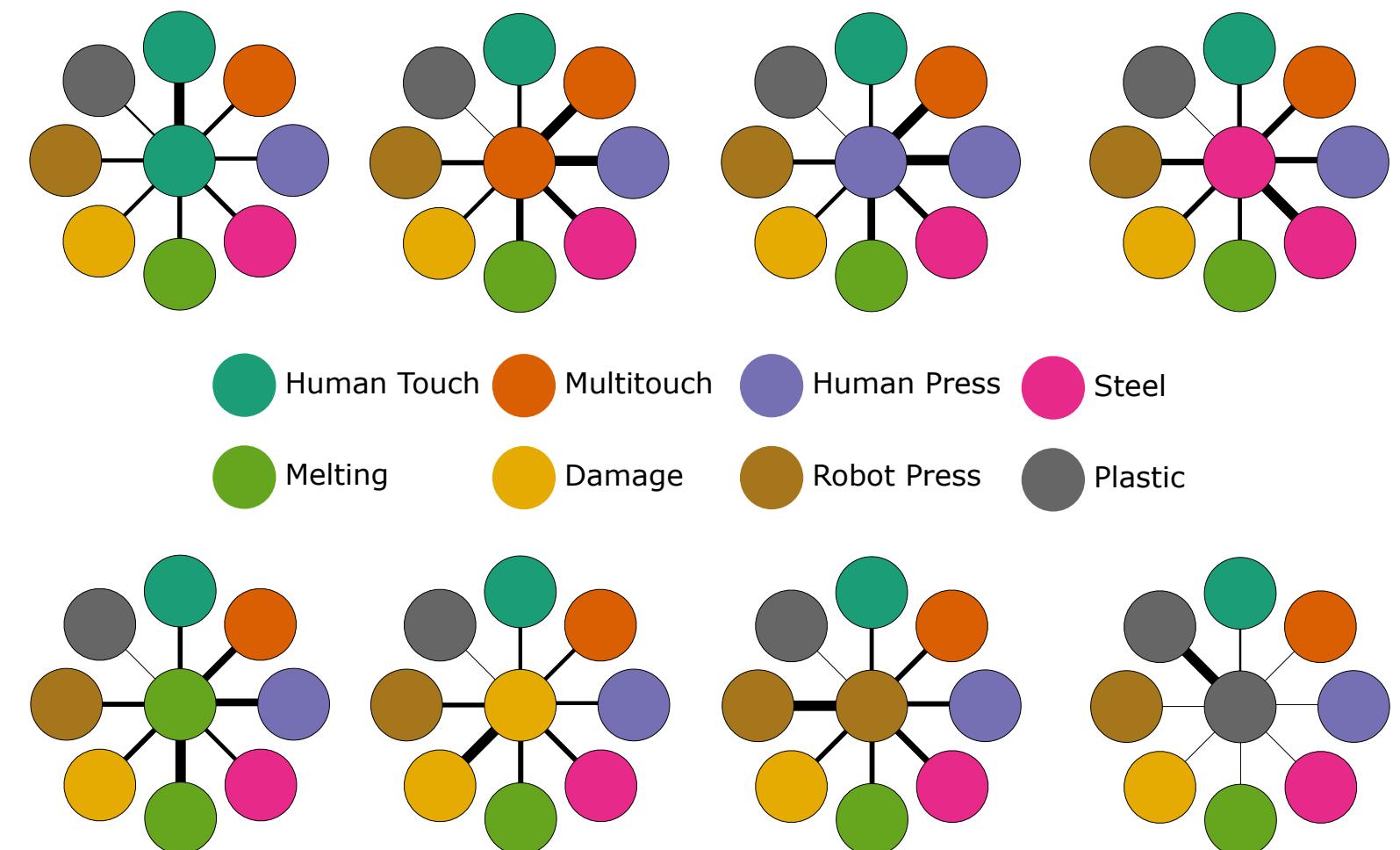
How do different modalities compare?

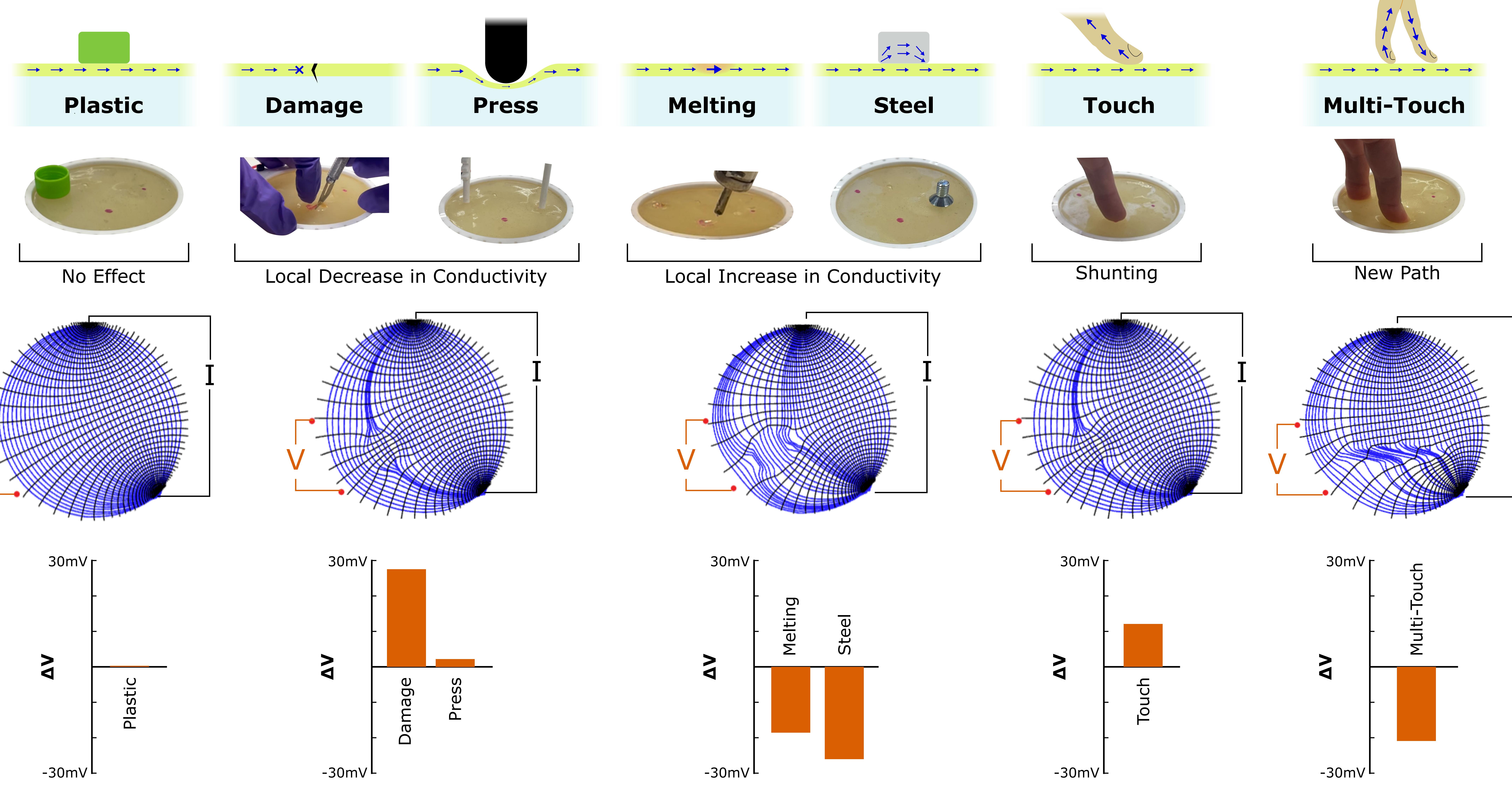
How do different morphologies compare?



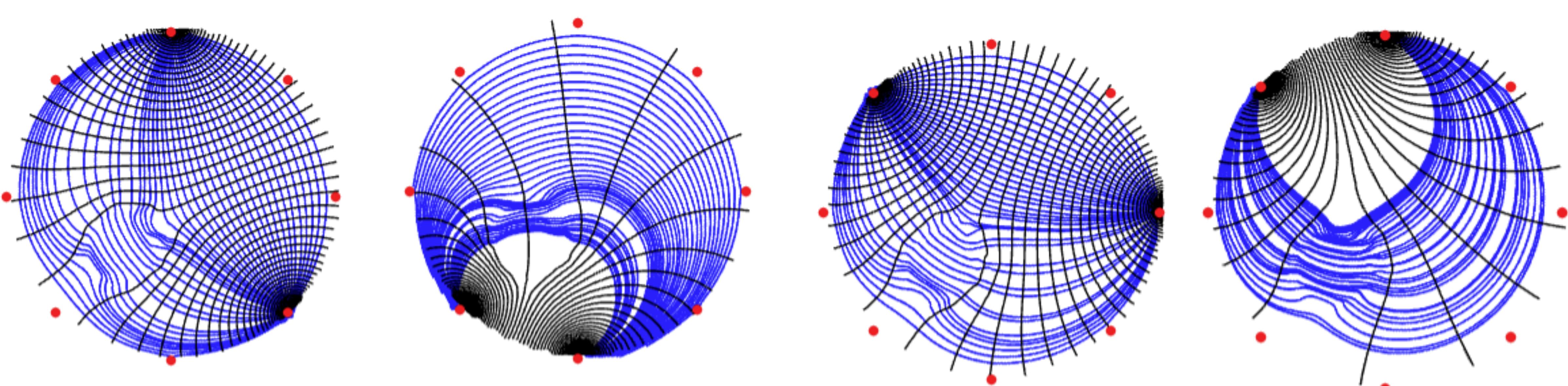
TRANSFERABILITY

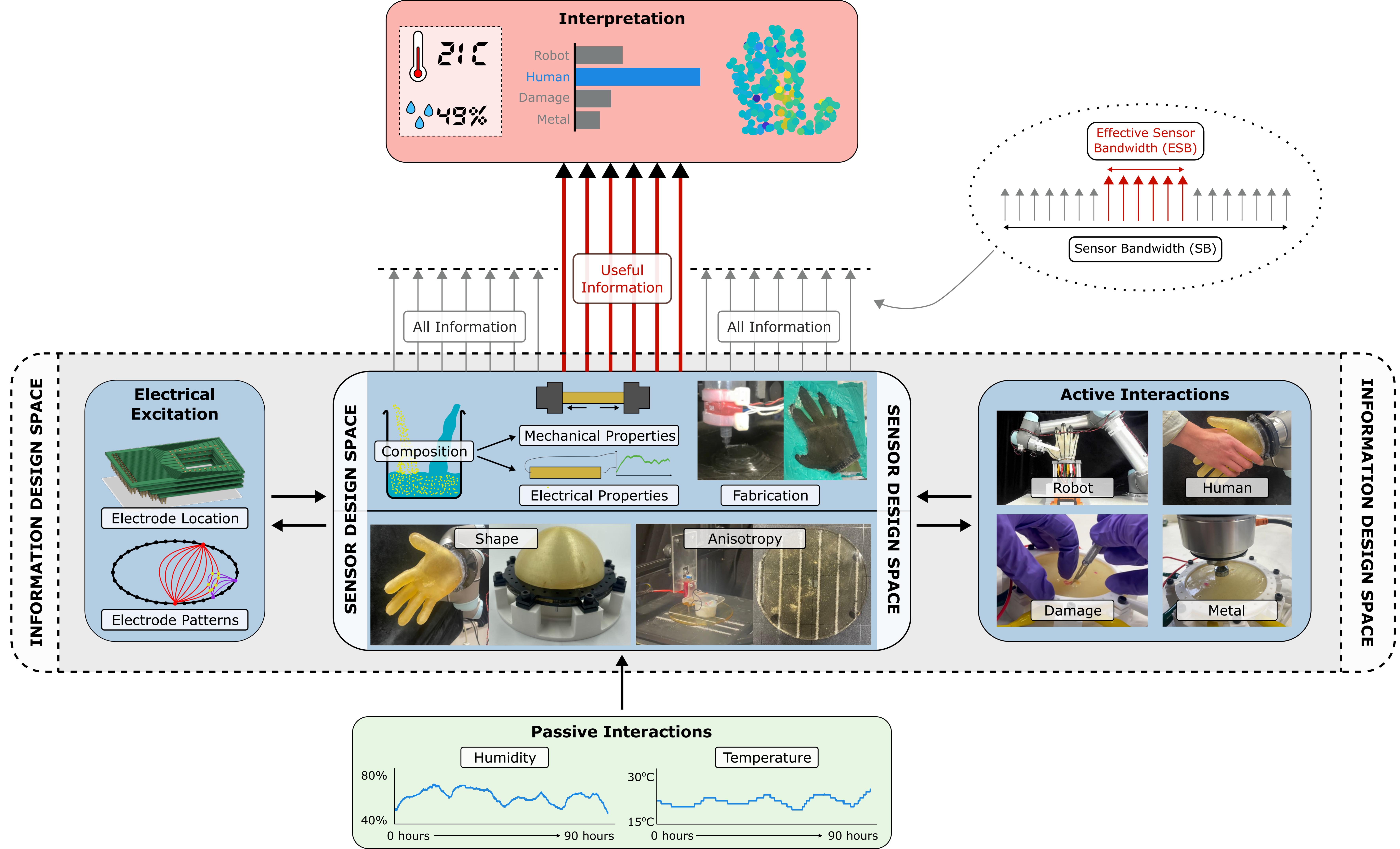
Clearer visualisations of connections: Chord diagram





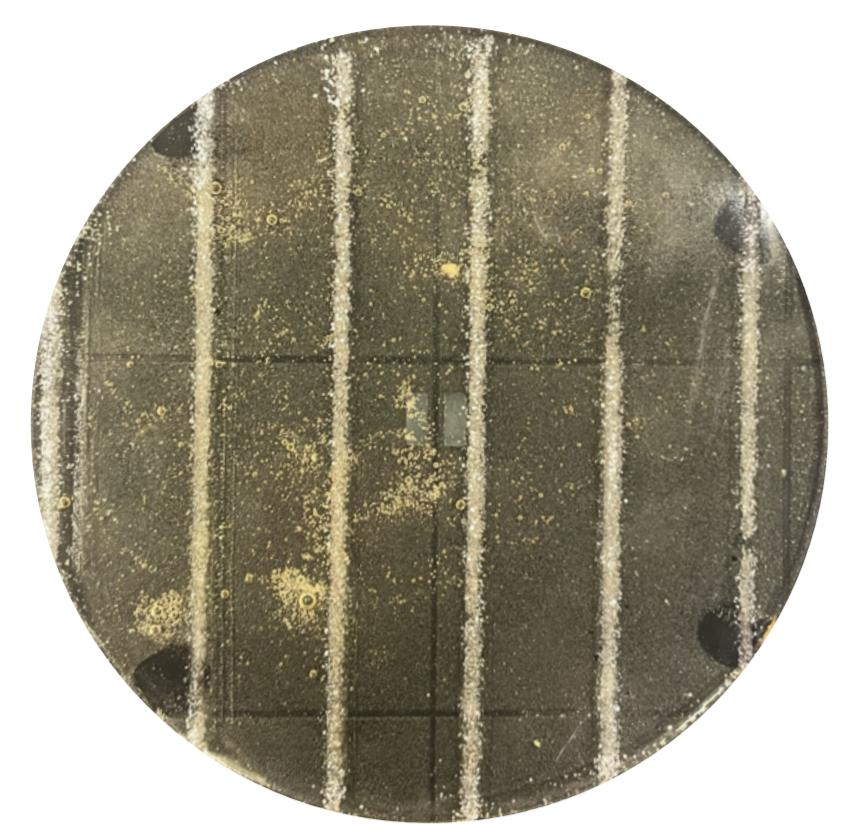
Different Injection Patterns Induce Different Voltage Fields: Enormous selection available to choose from



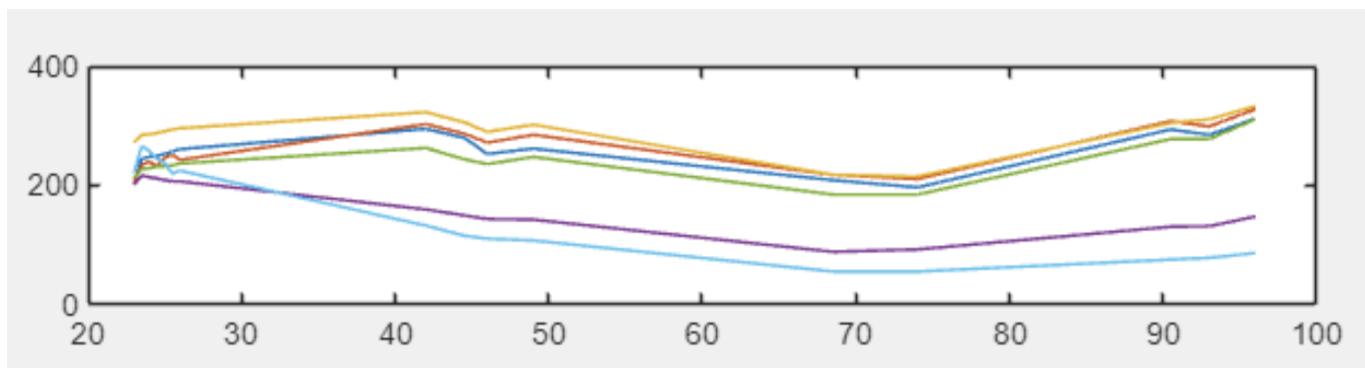


MATERIAL DESIGN SPACE

Salt Anisotropy

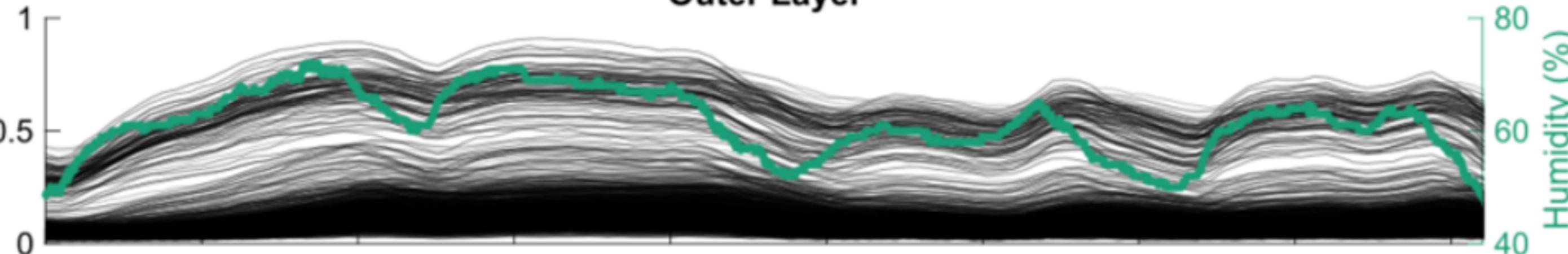


Fabrication/morphologies

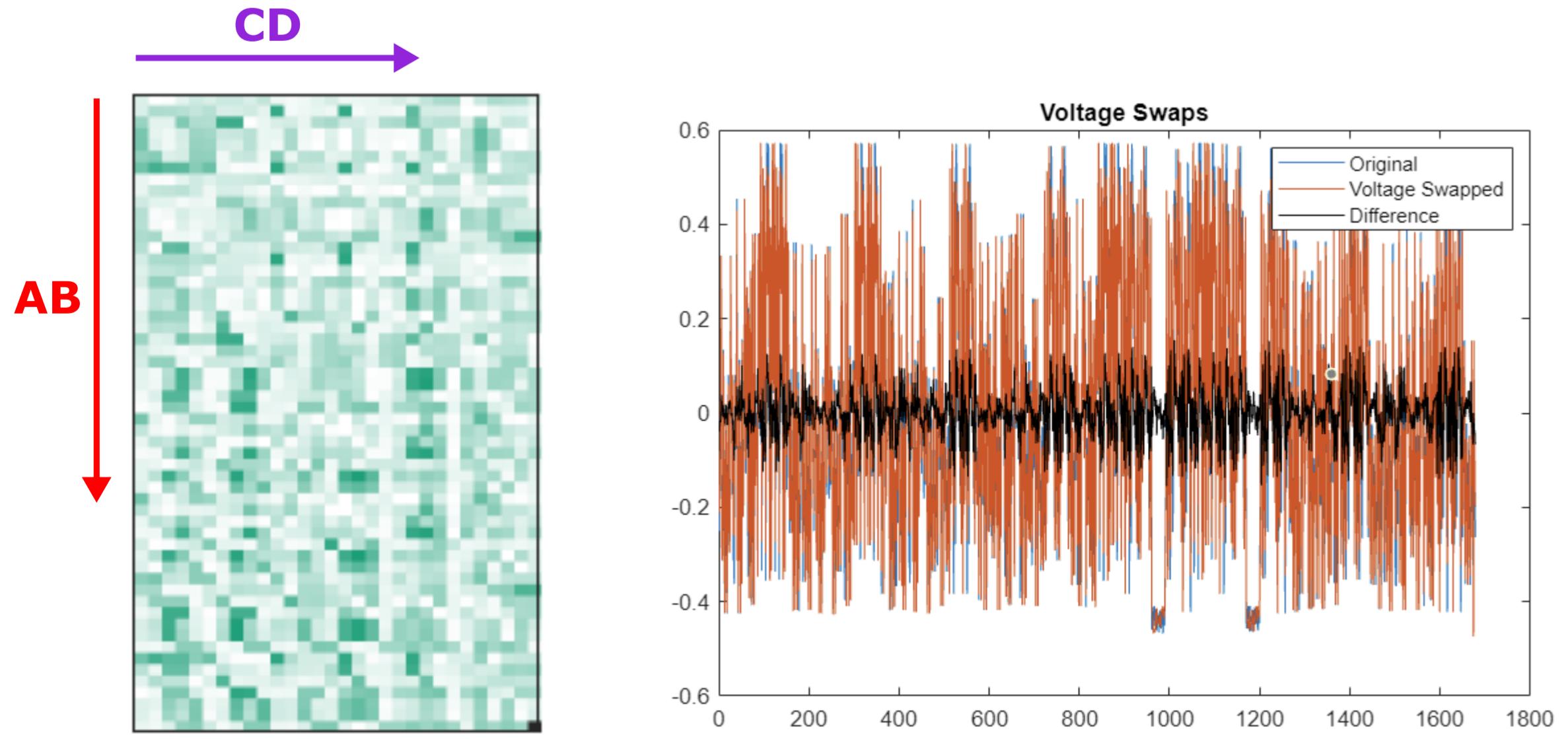
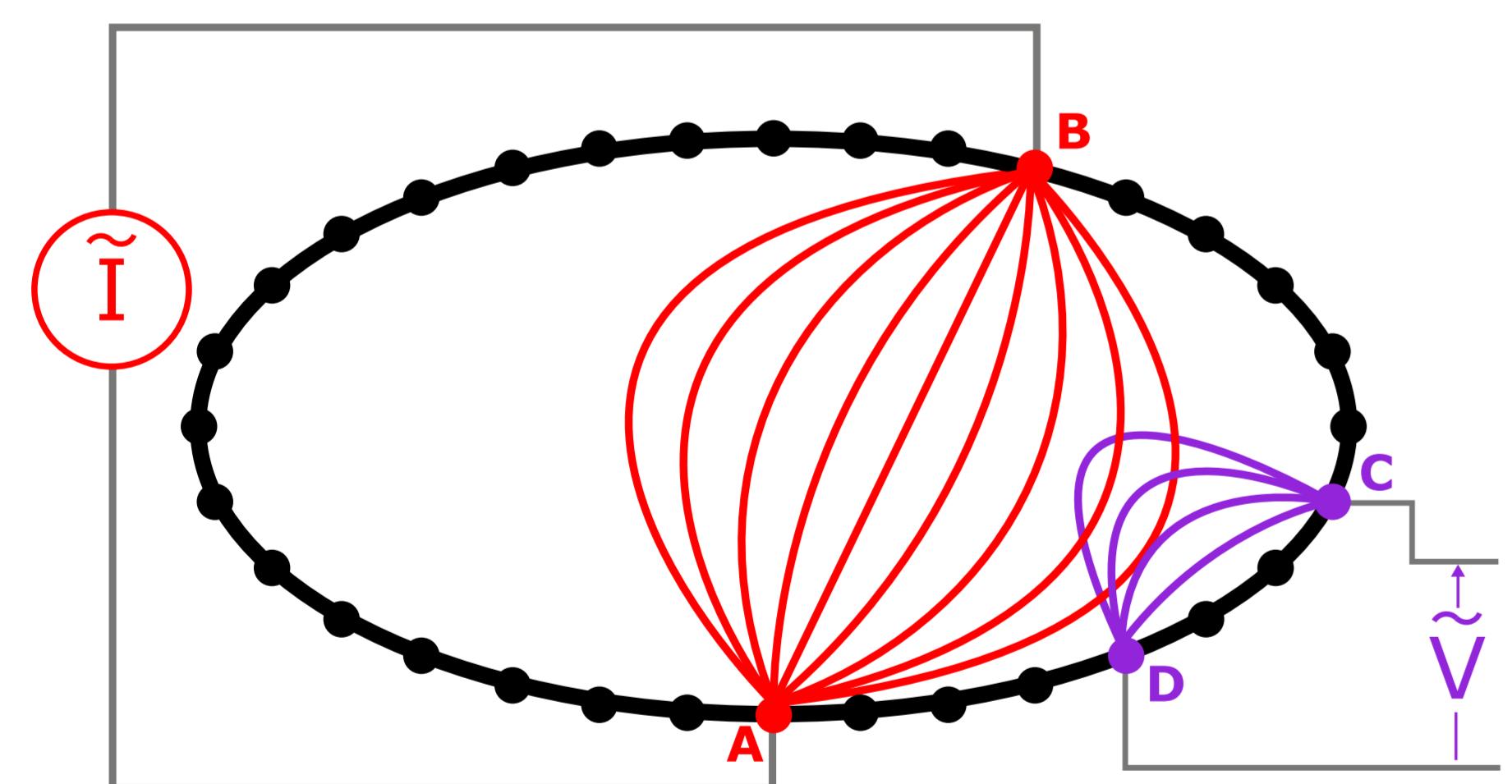
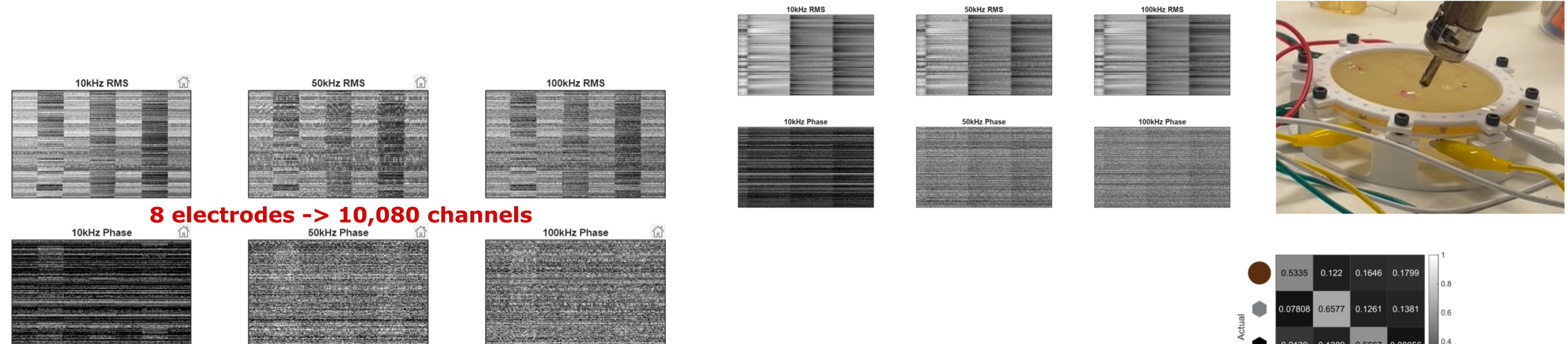


Basic Mechanical/electrical properties

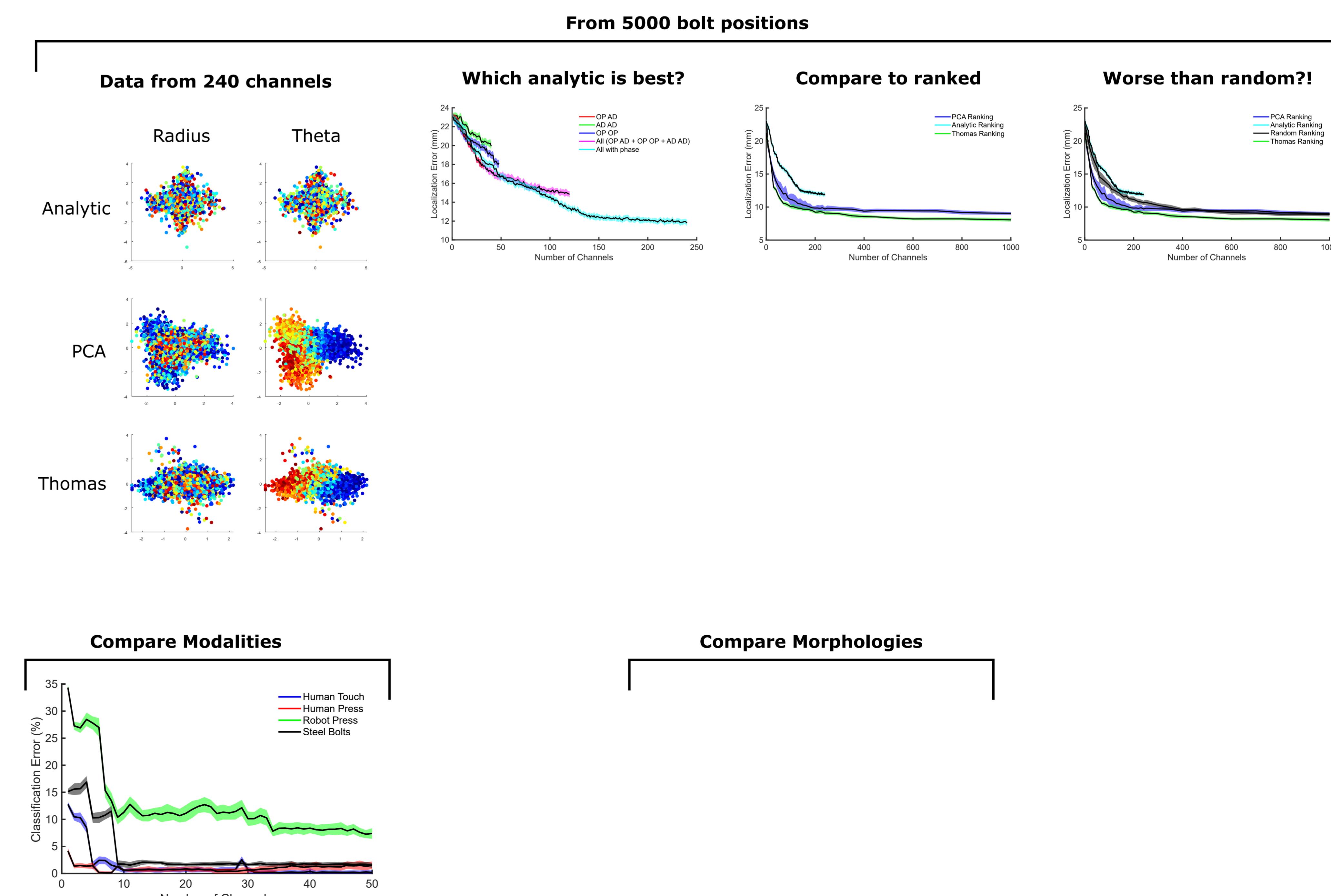
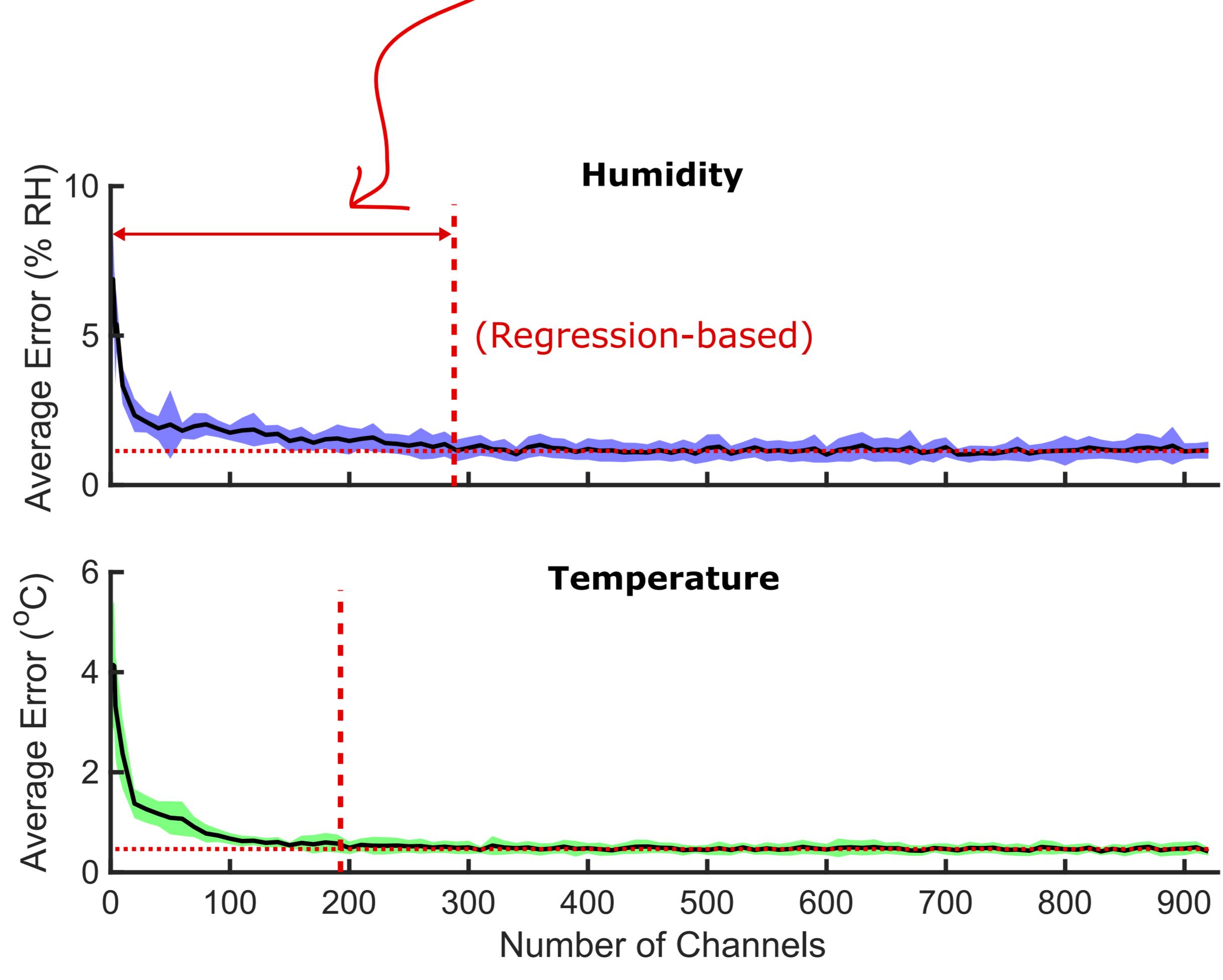
Temperature/humidity responsiveness

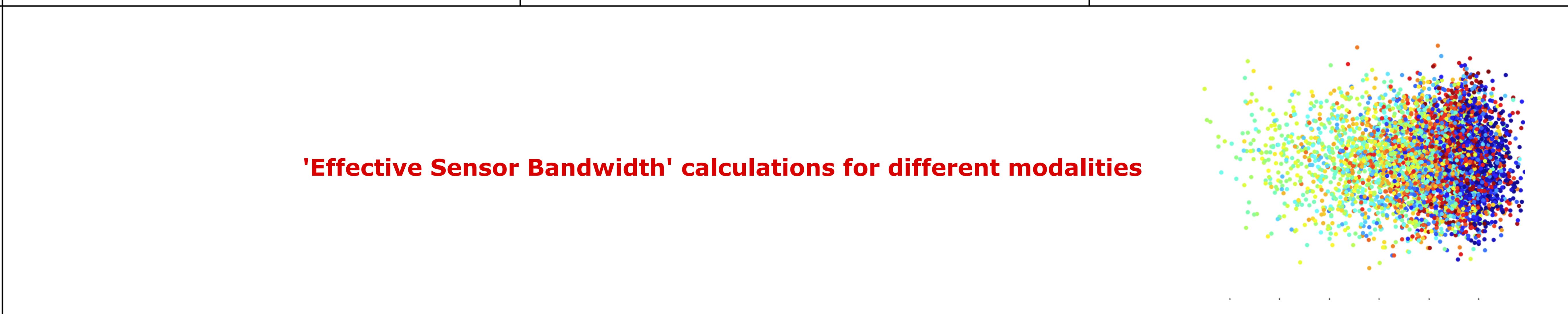
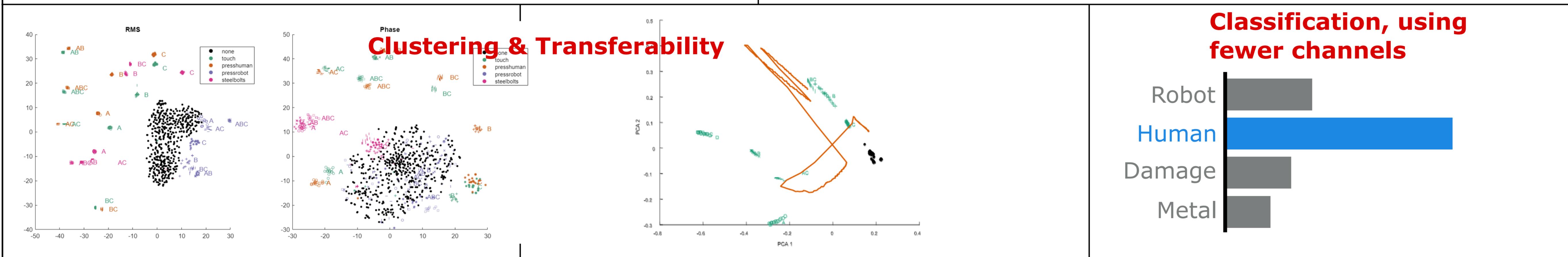
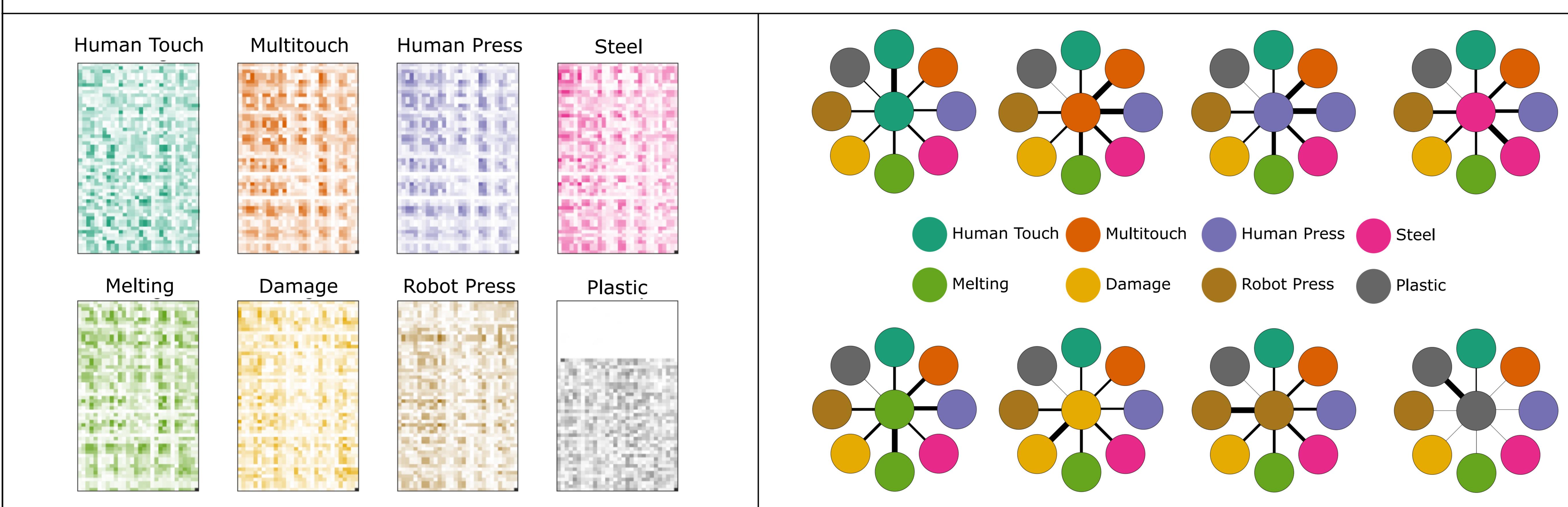
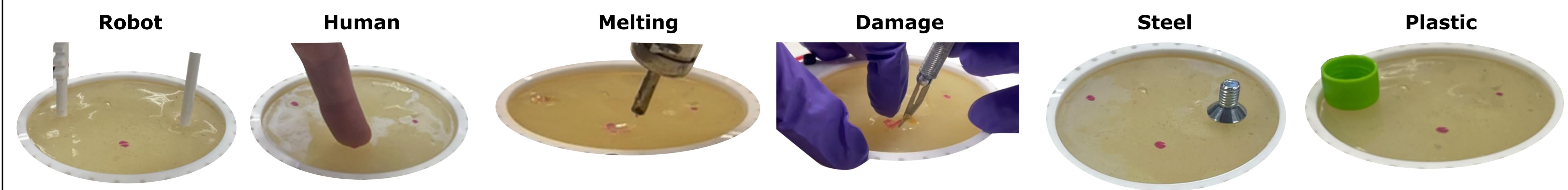
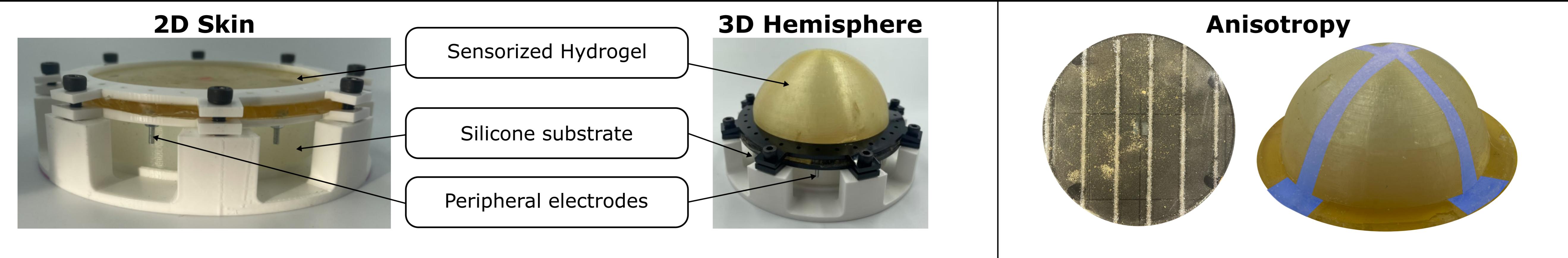


EXCITATION DESIGN SPACE To convey sheer quantity of possible data throughput



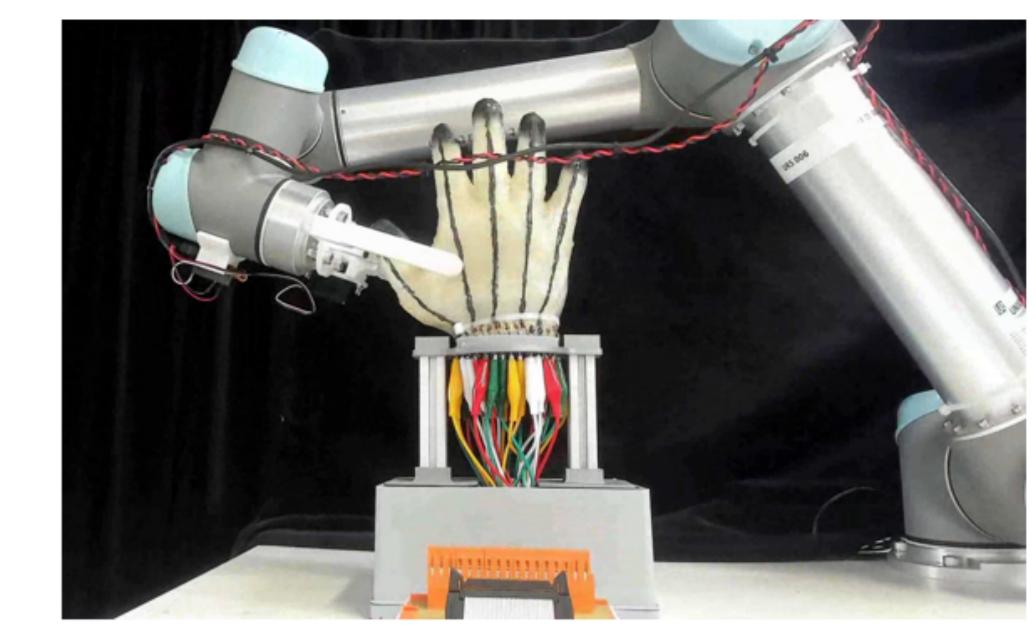
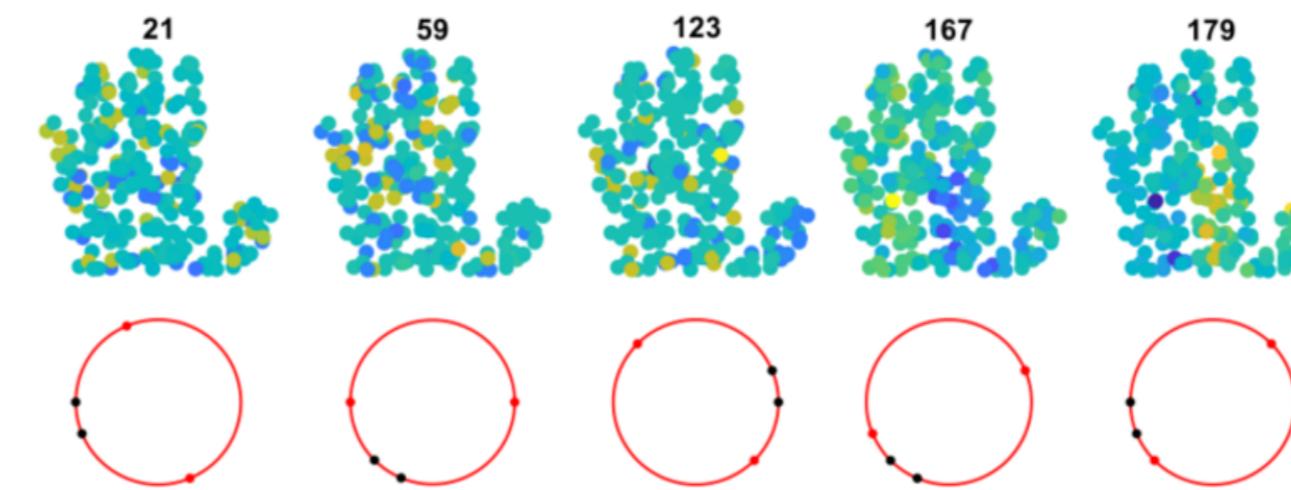
First quantification of 'useful information'





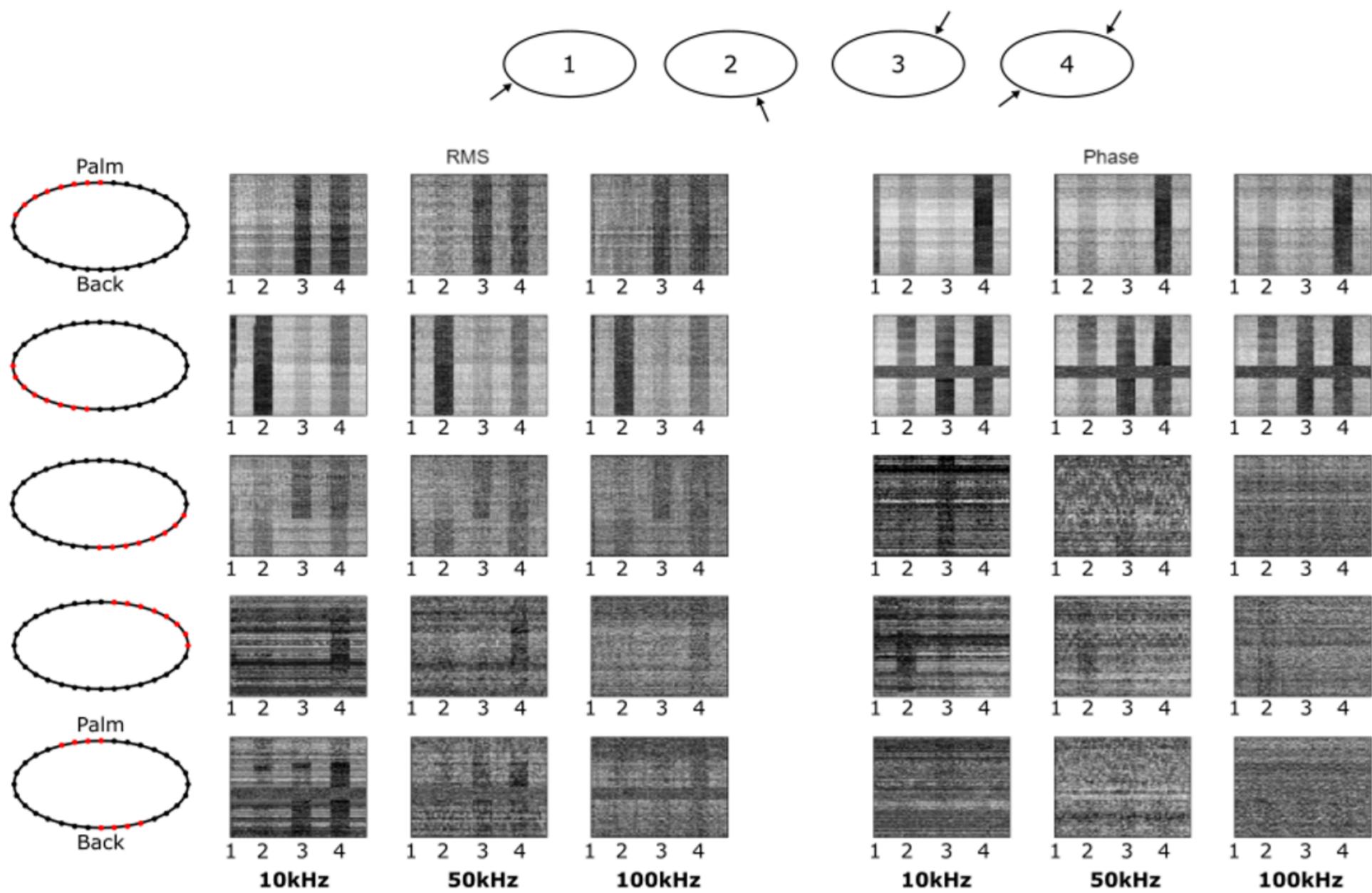
+ Additional Figure: Deeper dive into electrode combinations with learning approaches e.g. Saliency maps

HAND TRANSFER



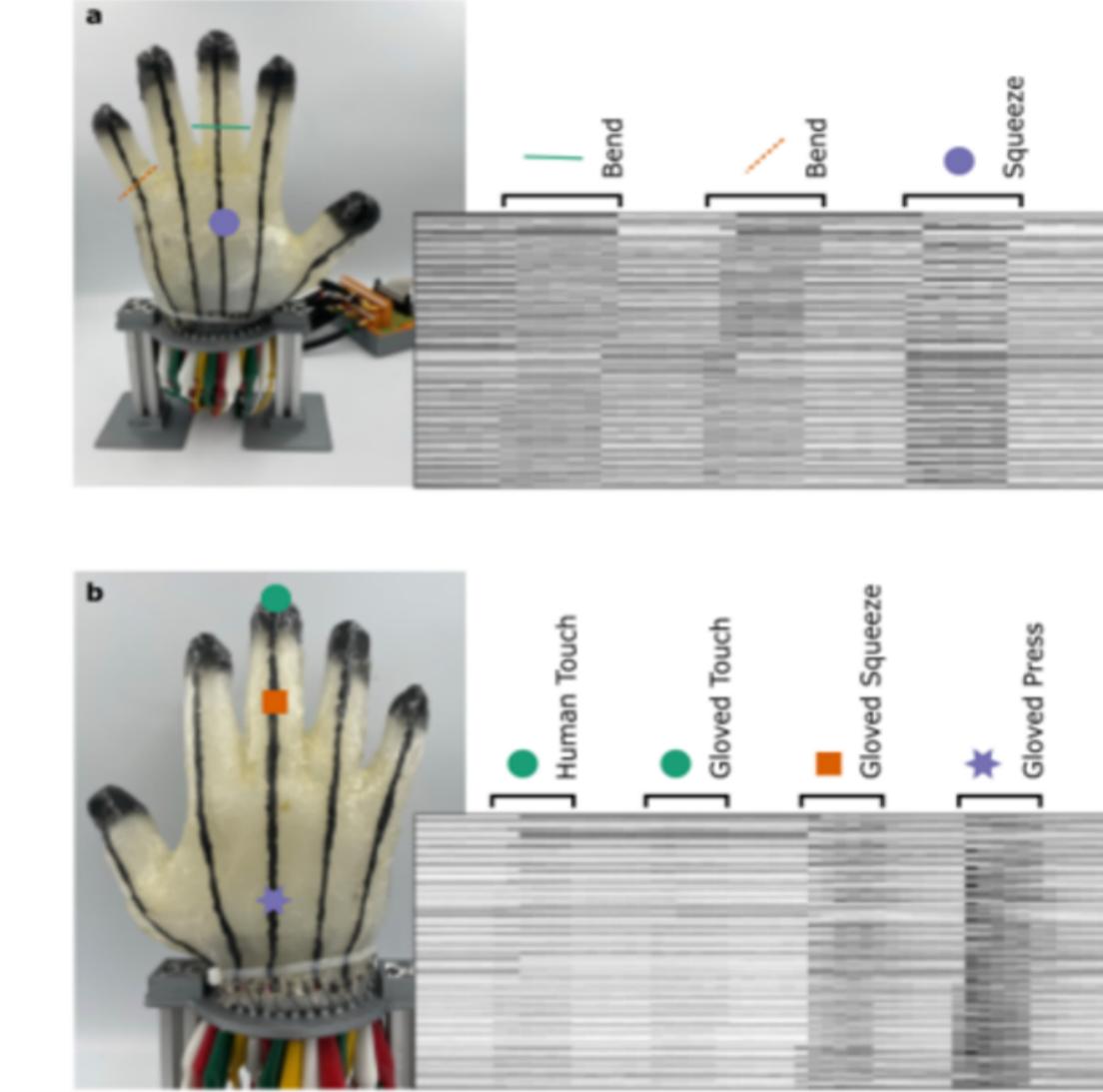
Data still required

Isotropic



Quantify ESB

Anisotropic



Quantify ESB

FINAL DEMO

Environment monitoring

Modality Classify

Electrode selection

Predict stimuli