

# Participant Information Sheet

## Human Strategy of Texture Detection: Understanding Perception through Active Touch

### Introduction

We would like to invite you to participate in a study aimed at understanding how humans perceive and identify different textures through active touch. Before you decide to participate, it's crucial that you comprehend why this research is being conducted and what your participation will entail. Please take time to read through the following information carefully. For any queries or if you need more information, kindly reach out to Ao Li, Department of Engineering Mathematics, University of Bristol, Bristol ([yt22389@bristol.ac.uk](mailto:yt22389@bristol.ac.uk)).

### Who is organising this research?

The director of studies for this research is Dr. Ben Ward-Cherrier ([b.ward-cherrier@bristol.ac.uk](mailto:b.ward-cherrier@bristol.ac.uk)).

### What is the purpose of this study?

The objective of this study is to investigate how humans discern and categorize different textures through tactile sensations. We aim to understand what texture characteristics are most important, when these characteristics are perceived, and how they're processed and classified in the human brain. We plan to do this by having participants explore a range of textures and describe their experiences and perceptions.

### Why have I been invited to take part?

Your participation is completely voluntary. If you decide to take part, you will be asked to give consent for us to use your data. You're free to withdraw at any point during the experiment without providing a reason. After the experiment, you'll be asked once more if we're allowed to use your data. Should you answer 'no', all data will be deleted. You may also withdraw from the study up to 2 weeks after completion, and your data will be destroyed and not included in the study results.

### What will happen to me if I take part and what do I have to do?

If you consent to participate, you'll be required to attend a brief session of instructions before the experiment. This is a brief description of the texture exploration task that followed. Then you'll be asked to interact with various textures and describe your perceptions. Your interactions will be recorded by a camera and force sensor for further analysis; however, your face will not be visible and your name will not be recorded.

### Coronavirus precautions

We will adhere to current social distancing guidelines to ensure your safety during the experiment. Face masks and hand sanitizer will be available for you and used by the researcher. All equipment will be thoroughly sanitized between participants. If you're feeling unwell in any way, please inform the researcher using the contact details provided, and we will arrange a new date for your participation or find an alternative.

### What are the possible benefits and/or risks of taking part?

The overarching aim of this project is to deepen our understanding of human tactile perception, which can inform various fields, such as robotics, prosthetics, and rehabilitation. We do not foresee any significant risks to you during your participation in this study. However, if you feel uncomfortable at any time, you're free to terminate the study without explanation.

### What will happen to your information?

All the information we receive from you will be treated in the strictest confidence. All gathered data will be anonymised and confidential, and participants will never be identifiable post-publication. All information collected in this research project will be processed by the University in accordance with the terms and conditions of both the Data Protection Act (2018), as described in the University of Bristol Data Protection Policy, aka the General Data Protection Regulation (GDPR). We will store the anonymised data on the University of Bristol data repository and not make it available to any third party unless permitted or required to do so by law.

### Where will the results of the research be published?

A report will be written containing our research findings. This report will be available on the University of Bristol's open-access Research Repository. A hard copy of the report will be made available to all research participants if you would like to see it. Key findings will also be shared with the University of Bristol. Anonymous and non-identifying direct quotes may be used for publication and presentation purposes.

### Questions or comments?

If you have any questions or comments regarding this notice or the research study that you are participating in, or you wish to exercise any of your rights, you should contact the research team responsible for the study (details will be provided in the participant information sheet). You could also contact the University of Bristol's Data Protection Officer by email at [data-protection@bristol.ac.uk](mailto:data-protection@bristol.ac.uk) or by phone at (0117) 394824.

### What if something goes wrong?

Any concerns, queries and /or complaints can be addressed by contacting either the lead experimenter, Ao Li ([yt22389@bristol.ac.uk](mailto:yt22389@bristol.ac.uk)) or the Director of Studies, Dr. Ben Ward-Cherrier ([b.ward-cherrier@bristol.ac.uk](mailto:b.ward-cherrier@bristol.ac.uk)).

### What if I have more questions or I do not understand something?

If you would like any further information about the research please contact in the first instance: Ao Li, Colston Avenue, BS1 4TR, Bristol, UK. ([yt22389@bristol.ac.uk](mailto:yt22389@bristol.ac.uk)).

Thank you for your time!