



## **Participant Information Sheet for Adults**

UCL Research Ethics Committee Approval ID Number: 26581/001

### **YOU WILL BE GIVEN A COPY OF THIS INFORMATION SHEET**

**Title of Study: Perception, Discomfort, and Avoidance behaviours of Pedestrians in interactions with E-scooter: The Role of Environmental Factors**

**Department:** Civil, Environmental and Geomatic Engineering

**Name and Contact Details of the Researcher(s):** Dr Tatsuto Suzuki (t.suzuki@ucl.ac.uk, 020 8138 7903)

**Name and Contact Details of the Principal Researcher:** Professor Nick Tyler ([n.tyler@ucl.ac.uk](mailto:n.tyler@ucl.ac.uk), 020 7679 1562)

*You are being invited to take part in a research project. Before you decide, it is important for you to understand why the research is being done and what participation will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.*

#### **1. What is the project's purpose?**

This is a study, to understand how pedestrians interact with an approaching electric scooter, and how they perceive discomfort in different traffic and lighting conditions with an electric scooter passing by.

#### **2. Why have I been chosen?**

You have been asked to participate in this study because you fit the following criteria:

You are someone over 18 years of age, with no exceptional visual, cognitive, or musculoskeletal capabilities which could affect the performance of outdoor walking.

#### **3. Do I have to take part?**

It is up to you to decide whether or not to take part. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a consent form. You can withdraw your involvement at any time during the experiment and my data up to one month after the experiment without giving a reason and without it affecting any benefits that you are entitled to. After one month your data will have been collated into the analysis and cannot be removed. If you do decide to withdraw, please contact Dr Tatsuto Suzuki (t.suzuki@ucl.ac.uk, 020 8138 7903).

#### **4. What will happen to me if I take part?**

If you decide to take part, you will attend an experiment at the UCL People Environment Activity Research Laboratory (PEARL). This research will involve you walking along a designated straight path at natural speed wearing a headset of functional near-infrared spectroscopy (fNIRs) (see Figure 1) and an eye tracking device (see Figure 2) and physiological sensors on your fingers (see Figure 3) for the measurement of electrical dermal

activity (EDA). In the experiment, an e-scooter operated by trained PEARL staff, will approach you along a line separate from your walking path with different distances and at different speeds. This will be done under two lighting conditions (approximately daylight and evening light) and will be video recorded. You will be asked to rate your discomfort level when the electric scooter passes by after finishing a trial and will be asked to answer demographic and transport questions after completing all trials. You may stop the experiment at any time if you feel uncomfortable about continuing, by indicating this to the research staff.

**5. Will I be recorded and how will the recorded media be used?**

We will record the experiment on video so that we can see where you walk when the e-scooter is approaching. This recording will capture your whole body image less than 40(W) x 120(H) pixels to track your position and might capture your face in less than 20 x 20 pixels. The video recording data will only be used for this purpose in the experiment. It will be stored securely on the UCL One Drive secure server and will be securely destroyed on or before 31 August 2030. Only the research team involved in this experiment will have access to the data.

**6. What are the possible disadvantages and risks of taking part?**

Apart from the eye tracking, the EDA and the fNIRS devices, you will not be exposed to any experience that you would not expect to encounter on being in a public space. The total walking distance at natural speed in the experiment would be 2,000m, with rest breaks, and you can rest at any time. The fNIRS, eye tracking, and EDA devices are standard non-invasive equipment. PEARL is a closed, secure, laboratory, so there will be no interventions from anyone or anything other than the experimental conditions described above. If you experience or think that you will experience any discomfort as a result of any part of the experiment, we will stop the experiment. To ensure that there is no risk of reputational damage to you or the company you work for, all responses will be anonymised

**7. What are the possible benefits of taking part?**

This work will help us define for future projects how pedestrians can be protected from electric scooters by improving road and footway design. Experiencing how an e-scooter is approaching from the front or back could help you understand pedestrian and e-scooter safety.

**8. If you feel you wish to make a complaint to an independent person please contact**

Chair of the UCL Research Ethics Committee – [ethics@ucl.ac.uk](mailto:ethics@ucl.ac.uk)

**9. Will my taking part in this project be kept confidential?**

Yes. You will not be able to be identified in any ensuing reports or publication. All data will be securely destroyed on completion of the project

**10. Limits to confidentiality**

Confidentiality will be respected subject to legal constraints and professional guidelines. Please note that assurances on confidentiality will be strictly adhered to unless evidence of wrongdoing or potential harm is uncovered. In such cases the University may be obliged to contact relevant statutory bodies/agencies

**11. What will happen to the results of the research project?**

This research will inform subsequent development of sounds for e-scooters to be used in public spaces. Please contact the principal researcher to find out more ([n.tyler@ucl.ac.uk](mailto:n.tyler@ucl.ac.uk))

**12. Who is organising and funding the research?**

This research is being conducted by UCL and Nagoya Institute of Technology

**Contact for further information**

Please contact Nick Tyler if you have any queries about this research ([n.tyler@ucl.ac.uk](mailto:n.tyler@ucl.ac.uk), 020 7679 1562)

**Notice:**

The controller for this project will be University College London (UCL). The UCL Data Protection Officer provides oversight of UCL activities involving the processing of personal data, and can be contacted at [data-protection@ucl.ac.uk](mailto:data-protection@ucl.ac.uk)

This 'local' privacy notice sets out the information that applies to this particular study. Further information on how UCL uses participant information can be found in our 'general' privacy notice:

For participants in research studies, click [here](#)

The information that is required to be provided to participants under data protection legislation (GDPR and DPA 2018) is provided across both the 'local' and 'general' privacy notices.

The lawful basis that will be used to process your personal data are: 'Public task' for personal data.

Your personal data will be processed so long as it is required for the research project. We will anonymise or pseudonymise the personal data you provide and will endeavour to minimise the processing of personal data wherever possible.

If you are concerned about how your personal data is being processed, or if you would like to contact us about your rights, please contact UCL in the first instance at [data-protection@ucl.ac.uk](mailto:data-protection@ucl.ac.uk)

**Thank you for reading this information sheet and for considering taking part in this research study.**



*Figure 1* fNIRS headset



Figure 2 Tobii Eye tracker glasses



Figure 3 EDA sensors