

PARTICIPANT INFORMATION LETTER

Validating a human-human interaction model for merging

21/10/2021

Dear Sir / Madam,

You have been asked to participate in a research study titled Validating a human-human interaction model for merging. This study is being done by O. Siebinga, A. Zgonnikov and D.A. Abbink from the TU Delft. In this letter you will find information about the research. If you have any questions, please contact the persons listed at the bottom of this letter.

Background and purpose of the research

In order to study human-human interactions in driving scenarios, we have created a theoretical model for such situations. In this study, we aim to validate this model for a simplified merging scenario. This scenario is based on - but not exactly the same as - merging on a highway.

Benefits and risks of participating

There will be no benefits from participating, nor are there any known risks.

What does participation in the research involve?

In this experiment, you will control a car in a simplified computer simulation using a commercial game controller. On a computer screen, you will see a top-down view of a car traveling along a road. At first the vehicle will travel through a tunnel. While in this tunnel, you can only observe the vehicle, but not control it. Once the car exits the tunnel, you can control the acceleration and braking of the car.

Another car, driven by another participant, will exit another tunnel at some point. Both cars will head towards a merge-point. You are instructed to maintain velocity, yet make sure that your car does not collide. If a collision happens, the experiment will be delayed by 20 seconds. The complete experiment is expected to last approximately 1 hour.

During the experiment, the trajectories of the cars, and your input will be recorded numerically. Before we start the actual experiment, you will have the opportunity to practice with the simulation-environment to make yourself familiar with it. After this training phase, you will participate in 100 trials. We will hold (at least) two short brakes during these trials.

Before the training phase, you will be asked to supply your age and gender. These will be saved anonymously and serve to provide statistics on the participants in the publications. You will also be provided with a confidential participant identifier. This identifier is randomly generated by the software and is only meant for you as a participant. The experimenter nor any other participant should know this identifier. If, at any time, you wish to rectify or withdraw your data from the study, you will need this identifier to let the researchers know what data should be rectified or removed.

Procedures for withdrawal from the study

Your participation in this study is entirely voluntary and you can withdraw at any time. If you give your consent to this research, you have the freedom, at any time, to come back on this decision. You can request access to and rectification or erasure of personal data. You do not have to give an explanation for your decision. You can do this by contacting Olger Siebinga via o.siebinga@tudelft.nl and providing your confidential participant identifier. If you request erasure of your data, it will be removed from the dataset (if technically feasible), unless the data has already been used in scientific publications such as peer-reviewed scientific journals or conference proceedings or archived in a data archive.

Confidentiality of data

This investigation requires that the following personal data are collected and used: age and gender. To safeguard and maintain confidentiality of your personal information, necessary security steps will be taken. Your data will be stored in a secure storage environment at TU Delft. Data will only be accessible to the researchers performing this study. All data will be processed confidentially and stored using a confidential participant identifier only.

The results of this study will be published in future scientific publications. Your participant number and name will never be shared on publications (thesis, scientific publications, other reports) about the research.

Contact Information

If you have any complaints regarding confidentiality of your data, you can contact the TU Delft Data Protection Officer (Erik van Leeuwen) via privacy-tud@tudelft.nl or the Dutch Data Protection Authority (Autoriteit Persoonsgegevens).

On behalf of the researcher(s), thank you in advance for your possible cooperation.

Olger Siebinga (o.siebinga@tudelft.nl)