Office of Research Ethics
CARLETON UNIVERSITY

# Research Ethics Protocol Form

This is the primary CUREB study submission form, to be used when none of the other submission forms, intended for more specialized categories of research, are suitable. If you have any doubt about which form to use, or for help in completing this form, please contact the Office of Research Ethics at ethics@carleton.ca or by phone: 613 520 2600 ext. 2715 (CUREB A) or ext. 4085 (CUREB B).

Please submit this form, and all accompanying documents, through cuResearch. For further instructions, go to https://carleton.ca/researchethics/submit-an-application/.

## 1. Title and Date

**1A Project Title**

Title of Research Project (Detailed instructions, Example)

Evaluation of Input Modes for "BSAFE": Women's Wearable Safety Device

**1B Submission Date**

Date of completion of this form. Update each time the form is revised. (Detailed instructions, Example)

*3/20/2019*

**1C Attachments**

List documents included with this application (e.g. consent materials, invitations, permissions) (Detailed instructions, Example)

1. Consent-formB.pdf (Consent form for participant group B)
2. Recruitment-Poster.docx (Recruitment-Poster)
3. Online-Invitation.docx (Online-Invitation Letter)
4. Pre-Questionnaire.docx (Pre-Questionnaire Form)
5. Post-Questionnaire.docx (Post-Questionnaire Form)
6. Certificates.pdf (All the certificates)

## 2. Project Team

**2A Lead Researcher**

- ☐ Academic or Library Staff
- ☐ Post-doctoral Fellow
- ☒ Graduate Student
- ☐ Undergraduate
- ☐ Other

Last name/First name

*PHILIP, Siju*

Official university (or other institution) email address

siju.philip@carleton.ca

Department, faculty and institution (Detailed instructions, Example)

*School of Information Technology, Carleton University*

**2B Academic Supervisor**

- ☐ Same as lead researcher

Academic supervisor(s) Last name/First name. (Note, the supervisor must be copied on all correspondence with CUREB.)

*GIROUARD, Audrey*

Official university (or other institution) email address:

*audrey.girouard@carleton.ca*

Department, faculty and institution (Detailed instructions, Example)

*Associate Professor*

*School of Information Technology, Carleton University*

**2C Project Team Members**

☐ No other team members

List the project team members: 1) Last name/First name 2) Email address 3) Role in project 4) Department and institution (Detailed instructions, Example)

Yassaman Rezvani, Collaborator,
Email id: yassaman.rezvani@carleton.ca

Chanpreet Singh, Collaborator, School of Information Technology
Email id: chanpreet.singh@carleton.ca

## 3. Study Overview

**3A Study Goal**

What research question(s) will this study seek to answer (1-2 sentences)? (Detailed instructions, Example)

The primary goal of this study is to identify and evaluate the preferred mode of input, 'press' or 'tap', that women use to interact with a wearable safety device.

**3B Study Purpose and Benefits**

Study rationale: why should the research be pursued; what are the benefits, and to whom? (Benefits can be to research community, companies, or society in general.) (Detailed instructions, Example)

This empirical study is a usability evaluation of a prototype, BSAFE, to be used as a wearable safety device for women. Although, some studies and research related to usability evaluation of safety wearables have been done in the past, the evaluation of different input modes, 'press' and 'tap', used by women to interact with a wearable safety device has not been addressed.

We expect that by developing the above HCI prototype that helps to ensure the women safety in a distressed situation and conducting a user study on it we would be able to identify and evaluate the preferred mode of input used by women interacting with the wearable safety device.

The focus of this study is on user experience and women's overall satisfaction with their wearable safety device. This research aims to show that the results of our experiment is valid and reliable. The contribution to the research community will be of an Empirical research type.

**3C Participant Interactions Overview**

Briefly describe what will happen to, or will be required of, the participants during the research. (Only a project overview is required). (Detailed instructions, Example)

Participants who contact the research team will be send the Letter of Invitation and an interview will be scheduled.

The participants will be greeted and informed about the identity of the researchers, the purpose of the study, the tasks, the length of the experiment (1 hour), the consent form, and what will be done with the data collected before and after the experiment (that the data will be made anonymous).

The researchers will inform the participants that the study sessions (task completion times) will be noted through the notes and the individual's privacy and confidentiality will be respected.

Then, the participants will be asked to sign a consent form. They will be informed about their right to refuse consent or to withdraw from the study at any time after providing consent. They will be compensated even if they decide to withdraw from the study.

The participants' demographics will be collected by using a Pre-Questionnaire (see Appendix A, Pre-Questionnaire). After collecting the pre-questionnaires, each participant will be assigned a unique identifier, Id #.

A short demonstration of how to use the system will be provided. The participants will be encouraged to ask questions before the experiment begins.

The study uses a Within-Subjects design, meaning each subject experiences all levels of the variable. To avoid bias, the subjects are divided into randomized groups. Two group of seven participants will be formed, Group 1 and Group 2.

Tasks: The following tasks will be performed by two groups
Group 1 – Having 7 females participants three of them are sitting and next four of them are standing.
Group 2 - Having 7 females participants four of them are sitting and next three of them are standing.

- Task 1: The participants will be asked to wear the prototype consisting of the bracelet with the "press" button on their nondominant hand. The task should be accomplished by using their dominant hand (they can sit or stand based on the task allocation by the researcher). They will be instructed to imagine that they are in a dangerous situation and should access their safety device and press the button to get help.

The participants will feel a vibration acknowledging them that their message was sent.

- Task 2: The participants will be asked to wear the prototype consisting of the band with the "tap" surface on their nondominant hand. The task should be accomplished by using their dominant hand (they can sit or stand based on the task allocation by the researcher). They will be instructed to imagine that they are in a dangerous situation and should access their safety device and to tap on the button to get help. The participants will feel a vibration acknowledging them that their message was sent.

The Tasks Sessions:

- The participants in Group 1 will be asked to perform Task 1, ten times, the first half while sitting and next half while standing. The data will be recorded. Then, they will complete a post experiment questionnaire (see Appendix B, Post-Questionnaire).

- The participants in Group 2 will be asked to perform Task 2, ten times, the first half while sitting and next half while standing. The data will be recorded. Then, they will complete a post experiment questionnaire (see Appendix B, Post-Questionnaire).

**3D Minimal Risk Review Request**

- ☐ Yes, minimal risk review
- ☒ No, not minimal risk

Should this protocol be considered for minimal risk review? If so, please briefly justify. If not requesting a minimal risk review, leave this section blank. (CUREB will decide whether an application is reviewed at full board or via a delegated process). (Detailed instructions, Example)

**3E Dates of Recruitment/Participant Interaction**

Estimated date when will you will start recruiting participants? (YYYY-MM-DD)

2019-04-01

Estimated date when you will end participant interactions? (YYYY-MM-DD) (Detailed instructions, Example)

2019-04-10

**3F Additional Reviews**

- ☒ No additional review
- ☐ Departmental review
- ☐ Grant council review

Has this project been reviewed for academic merit? (not required, but for the Board's information) By whom? (e.g. a Tri-Council grant application or student's thesis committee) (Detailed instructions, Example)

## 4. Methods: Participants

**4A Description of Participants**

Describe the participants and any inclusion and exclusion criteria. If using a separate sample of control participants, describe this group. (Detailed instructions, Example)

*Inclusion: We will recruit 14 female participants, aged 18 or older. The participants must speak English*
*Exclusion: Male participants.*

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**4B Number of Participants (Sample size)**

How many participants will be recruited? If multiple groups of participants are involved, breakdown by participant type. Provide a justification including a statistical rationale if appropriate. (Detailed instructions, Example)

*14 Female participants*

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**4C Vulnerable Population**

- ☒ Not Vulnerable Population

Describe any vulnerabilities of the participant group(s) that may compromise their ability to give free and informed consent or cause additional risks. Describe your mitigation strategy to ensure valid consent. (Detailed instructions, Example)

*Participants are above 18 years old and are not considered vulnerable.*

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**4D Participant Relationship to Researcher**

- ☒ No previous relationship
- ☐ Instructor-Student
- ☐ Client
- ☐ Employee
- ☒ Friends/Family
- ☐ Participated in previous study
- ☐ Other

Describe any relationship that exists between the participants and the research team or any recruiting party or sponsor. Indicate how relationships will be managed so there is no undue pressure on participants. (Detailed instructions, Example)

*Participants may be friends or student colleagues of the research team who may feel pressured to participate. The researcher will emphasize that participation is completely voluntary and that participants may withdraw at any time. Participation will not affect personal relationships in any way.*

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**4E Benefits to Participants**

- ☒ No Direct Benefits

Describe any potential direct benefits to the research participants as opposed to society or knowledge. (Detailed instructions, Example)

*You may not receive any direct benefit from your participation in this study. However, your participation may allow researchers to collect data needed to design and develop a usable, useful and efficient wearable safety device for women*

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**4F Benefits to Participant Community**

- ☒ No Direct Benefits

Describe any benefits to your research participant community (e.g. indigenous community), such as capacity building, knowledge sharing, and fulfillment of community research priorities. (Detailed instructions, Example)

*You may not receive any direct benefit from your participation in this study. However, your participation may allow researchers to collect data needed to design and develop a usable, useful and efficient wearable safety device for women.*

**4G Conflict of Interest**

- ☒ No conflicts
- ☐ Financial benefit to researcher
- ☐ Benefit to Corporation
- ☐ Other

Describe any conflicts of interest, and indicate how they will be managed. (Detailed instructions, Example)

*No Conflicts*

**4H Researcher Training with Participant Group**

- ☒ Not applicable

In addition to the TCPS2 training, describe any additional training the researcher(s) have (or will receive) to work with the proposed participants (e.g. research with Indigenous communities). (Detailed instructions, Example)

*Research team does no specific training.*

## 5. Indigenous Peoples and Community Engagement

**5A Research involving Indigenous/Aboriginal peoples**

If none of the statements are applicable, skip this section (Detailed instructions, Example)

- ☐ Recruitment criteria includes Indigenous identity as a significant factor
- ☐ Study will seek input from participants regarding Indigenous communities, cultures, artifacts, traditional knowledge or unique characteristics
- ☐ Indigenous identity or membership in an Indigenous community is a factor in data analysis (e.g. sub-group analysis)
- ☐ Interpretation of the research findings will refer to Indigenous communities, peoples, languages, histories or cultures

**5B Consultation**

Describe the consultation process with the indigenous community/ies. What is the community's involvement in governance of the research? With whom did you consult and what arrangements, if any, were made to implement Tri-Council (TCPS 2 Chapter 9) principles? If no consultation has taken place, please explain. (Detailed instructions, Example)

*NA*

**5C Approvals/Agreements**

As part of the above process, describe what approvals/agreements you have made with the participating community/ies. (Detailed instructions, Example)

*NA*

**5D Benefits to Participant Community**

Describe how the research will provide fair benefits to the participating community/ies, meet community research priorities, support capacity building through enhancement of the skills of

community personnel, and recognize the role of elders and other knowledge holders. (Detailed instructions, Example)

*NA*

**5E Participant involvement in research findings**

Describe how participants will be given the opportunity to participate in the interpretation of the data and review of research findings prior to the completion of any reports or publications? If such participation will not occur, explain. (Detailed instructions, Example)

*NA*

**5F Data Ownership, Control. Access and Possession**

Describe arrangements for the participating community's/ies' ownership and/or sharing of project data and findings, including the OCAP principles (ownership, control, access and possession).

*NA*

## 6. Methods: Recruitment

**6A Recruitment Methods**

- ☐ Not applicable
- ☒ Posters
- ☒ Social Media
- ☐ Online Panels (e.g. Qualtrics)
- ☐ Student Participant Pool (e.g. SONA)
- ☐ Emails
- ☐ Letters
- ☐ Telephone
- ☐ Snowballing
- ☐ Other

Describe each step of how participants will be recruited. This includes how prospective participants will be identified, how contact information will be obtained, how participants will be made aware of the study, and how participants can express their interest. Provide a copy of all the recruitment material(s) including any oral scripts, recruitment posters, recruitment emails, social media postings etc. (Detailed instructions, Example)

*The participants will be recruited by advertising on*

1. *Recruitment posters placed on billboards at Carleton in accordance with Carleton's posting policy. (The poster is attached to application.)*
2. *Social Media: the researchers will advertise the study poster on the Carleton Research Participants Facebook group (social media recruitment notice is attached)*

**6B Location of Recruitment**

- ☐ Not applicable
- ☒ Carleton
- ☐ Other Canadian School/University
- ☐ Canada
- ☐ Online
- ☐ Other

List all recruitment locations. If some locations require permission prior to recruitment, indicate if permission has been secured. (Detailed instructions, Example)

*The controlled experiment to test the hypotheses will be conducted at the Usability lab, HCI room 3111, at Carleton University located in Ottawa, Canada*

**6C Third Parties in Recruitment**

- ☒ Not applicable

If using third parties to recruit, indicate who is doing the recruitment and how it will be accomplished. Does the third party

have the prospective participant contact information? Are community leaders involved in identifying potential participants? (Detailed instructions, Example)

*Participants are recruited by the researchers for the experiment and hence no third parties are involved.*

**6D Recruitment risks to Participants**

- ☐ No risks

Describe any risks to participants during the recruitment phase, including risks to privacy. (Detailed instructions, Example)

*Though there are no physical risks involved, an emotional element is possible. This could be more evident among the victims of harassment as they would experience flashes of old memories while being asked to imagine themselves in a distressed situation.*

**6E Recruitment risks to Researcher**

- ☒ No risks

Describe any risks to the research team during the recruitment phase. (Detailed instructions, Example)

**6F Compensation**

- ☐ No Compensation
- ☒ Money / Gift Card
- ☐ Reimbursement of Travel Expenses
- ☐ Refreshments
- ☐ Course Credit
- ☐ Other

Describe all participant compensation and remuneration (including its monetary value) and indicate when participants will receive the compensation. What happens to the compensation if a participant withdraws? (Detailed instructions, Example)

*The participants will be compensated with a $5.00 Starbucks gift card at the end of the experiment, however, they will be compensated if they decide to withdraw at any time during the experiment.*

## 7. Methods: Informed Consent

**7A Obtaining informed consent**

- ☒ Signed consent
- ☐ Online consent
- ☐ Oral consent
- ☐ Implied consent
- ☐ Parent/Guardian consent
- ☐ Assent
- ☐ Other

Describe the process for obtaining informed consent from the participants (or guardians/legal representatives). If written consent is not used, explain the alternative method chosen. Include a copy of all consent forms, scripts and other materials. (Detailed instructions, Example)

*The participants will be asked to sign a consent form (please see the attached copy) after they are informed about the purpose of the study, the tasks, the length of the experiment (60 minutes), and what will be done with the data collected before and after the experiment (that the data will be made anonymous).*
*They will be informed about their right to withdraw from the study at any time. They will be compensated even if they decide to withdraw from the study.*

**7B Deception**

- ☒ Full Disclosure (i.e. no deception)
- ☐ Partial Disclosure

Describe and justify any deception and/or partial disclosure (e.g. what information is withheld). Describe the magnitude and likelihood of harm due to deception. Describe any planned secondary consent and include forms or text. (Detailed instructions, Example)

| | |
|---|---|
| ☐ | Mild Deception |
| ☐ | More than Mild Deception |

**7C Debriefing**

| | |
|---|---|
| ☐ | Not required |

Describe if, when, and how participants will be debriefed. (Include a copy of any documents that will be provided to participants). Describe any risks during debriefing and how they will be mitigated. (Detailed instructions, Example)

*At the end of the experiment, the participants will have the opportunity to talk about the experiment and share their feedback with the researchers. They will be provided with the researchers' contact information.*

**7D Withdrawal Procedures**

| | |
|---|---|
| ☐ | Not applicable |
| ☐ | Participants can withdraw |
| ☒ | Participants can only withdraw during the study session |
| ☐ | Special withdrawal procedures |
| ☒ | Full compensation to withdrawn participants |

Describe the procedures for a participant to withdraw. What will happen to data from participants who withdraw? Describe any deadlines and limitations on withdrawal, during the study or after research participation is complete. Explain if compensation amount is affected by withdrawal. (Detailed instructions, Example)

*The participants can only withdraw during the study session and they may request to one of the student researchers listed on the first page of the consent form that their data be removed and deleted after the data collection. Otherwise the data collected up to the withdrawal time can be used for the research.*

## 8. Methods: Data Collection

**8A Data Collection Methods**

| | |
|---|---|
| ☒ | Questionnaires / Surveys |
| ☐ | Interviews |
| ☐ | Focus Groups |
| ☐ | Oral and/or Visual Stimuli |
| ☒ | Equipment and/or software testing |
| ☐ | Other |

Describe in detail the method of data collection being used and provide details of any instruments used. Breakdown by phases, participant groups, or types if required. Complete the section on "online data collection" if relevant. (Fully describe or include a copy of any questionnaires, surveys, interview guides, or other data collection instruments). (Detailed instructions, Example)

*We will collect quantitative data (i.e. time and error rate) about the interactions by automatic logging of the user actions, and using a stop watch. We will collect qualitative data such as user demographics (see Appendix A) and user satisfaction ratings by using a Linkert scale questionnaire (see Appendix B). Experiment event logs will be used to record data, Id #, Task #, TStart: the start time of the task (hour, minute, second), TEnd: the end time of the task (hour, minute, second), Trial # (there are 10 trials), Date (year, month, day), Errors.*

*The researches will also take notes during the experiment about the task session.*

**8B Location of Participant Interactions**

| | |
|---|---|
| ☒ | Carleton |
| ☐ | Workplace |

Where will the research procedures involving participants take place? (Detailed instructions, Example)

*Usability lab, HCI room 3111, at Carleton University*

| | |
|---|---|
| ☐ | Public venue |
| ☐ | Online |
| ☐ | Outside Canada |
| ☐ | Other |

**8C Frequency and Duration of Participant Interactions**

How many times will you interact with participants? How long will each interaction take? (Detailed instructions, Example)

*The Participant Interaction: Total: 60 Minutes*

*The participants in Group 1 will be asked to perform Task 1, ten times. The data will be recorded. Then, they will complete a post experiment questionnaire (see Appendix B, Post-Questionnaire) (30 Minutes)*

*The participants in Group 2 will be asked to perform Task 2, ten times. The data will be recorded. Then, they will complete a post experiment questionnaire (see Appendix B, Post-Questionnaire) (30 Minutes)*

*The participants in Group 1 will be asked to perform Task 2, ten times. The data will be recorded. Then, they will complete a post experiment questionnaire (see Appendix B, Post-Questionnaire) (30 Minutes)*

*The participants in Group 2 will be asked to perform Task 1, ten times. The data will be recorded. Then, they will complete a post experiment questionnaire (see Appendix B, Post-Questionnaire) (30 Minutes)*

**8D Photography or Recordings**

| | |
|---|---|
| ☒ | Not applicable |
| ☐ | Photographs |
| ☐ | Audio Recording |
| ☐ | Video Recording |
| ☐ | Other (Please describe) |

If the participant will be photographed, video-recorded or audio-recorded, indicate how the data will be acquired and protected. How will consent for recordings be obtained? If other (e.g. fingerprints or eye-tracking) please describe. Can participants opt out of recordings and still participate? (Detailed instructions, Example)

**8E Translation or Transcription**

| | |
|---|---|
| ☒ | Not applicable |
| ☐ | Translation |
| ☐ | Transcription |
| ☐ | Researcher will translate or transcribe |

If you require the services of a translator or transcriber, describe what services you will use and how you will interact with the translator and/or transcriber. If a confidentiality agreement will be used, include a copy. (Detailed instructions, Example)

**8F Online data collection**

- ☒ Not applicable
- ☐ Carleton-based server
- ☐ Commercial server (based in Canada)
- ☐ Commercial server (outside Canada)
- ☐ Other

Describe the software platform used for online data collection, and the security of data storage. Where will data be stored? Will participant IP addresses be recorded? Are there any special limitations on privacy? (Detailed instructions, Example)

**8G Biological specimens or fluids**

- ☒ Not applicable

Describe the apparatus and methods to collect biological specimens or fluids (e.g., blood, saliva, tissue samples). How will specimens be stored? If any will be retained or transferred to another institution/research group, explain the research purpose, and plans for eventual destruction, if any. (Detailed instructions, Example)

**8H Biological or physical interventions**

- ☒ Not applicable

Describe any drugs, devices or diagnostic apparatus being studied or used, or any physical or physically intrusive research interventions, such as sending energy into the body (e.g. electrodes, MRI/X-ray), or physiological activities (e.g. exercise or stress). Explain any risks to the participants and compare the dose to established safety standards. (Detailed instructions, Example)

**8I Risk of Psychological Harm**

- ☐ No risks

Explain the nature, magnitude and probability of these risks and how they will be mitigated. (Detailed instructions, Example)

*The experiment will require the participants to assume themselves in a distressed situation, those with past experiences with harassment or violence might consider it to be emotionally challenging. Regardless, we will emphasize that participation is completely voluntary and will not result in any negative consequences. If emotional distress occurs, we will refer participants to the appropriate Health Services.*

**8J Risk of Physical Harm**

- ☒ No risks

Explain the nature, magnitude and probability of these risks and how they will be mitigated. (Detailed instructions, Example)

**8K Risk of Social and/or Economic Harm**

- ☒ No risks

Explain the nature, magnitude and probability of these risks and how they will be mitigated. (Detailed instructions, Example)

**8L Incidental Findings**

- ☒ Incidental findings unlikely

Describe possible incidental findings and how they will be managed (e.g. becoming aware of abuse of a child, imminent harm to a participant or third party, or potentially significant clinical findings). Any resulting limitations of confidentiality should be communicated to participants. (Detailed instructions, Example)

## 9. Methods: Data Storage and Analysis

**9A Identifiability of collected data**

- ☐ Identifiable
- ☒ Coded (pseudonyms)
- ☐ Anonymous
- ☐ Other

Describe the identifiability of research data at the point of data collection. If there are different levels of anonymity for different groups, describe. (Detailed instructions, Example)

*Data will be coded with the code key stored securely and separate from identifying information.*

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**9B Identifiability of stored data**

- ☐ Identifiable
- ☒ Coded (pseudonyms)
- ☐ Anonymous/anonymized
- ☐ Other

Describe the identifiability of stored research data. If a link to participant identities is retained (e.g. to permit compensation or withdrawal), also explain storage of linking data. Describe the process of anonymization if applicable. (Detailed instructions, Example)

*All identifying information from the study data will be removed, and each participant will be assigned a code, an Id #, so that the participant's identity will not be directly associated with the data they provided. All data, including coded information, will be kept in a password-protected file on a secure computer. We will encrypt any research data that we store or transfer.*

*Research records may be accessed by the Carleton University Research Ethics Board in order to ensure continuing ethics compliance. Research data will only be accessible by the researchers and the research supervisor.*

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**9C Identifiability of published data**

- ☒ Anonymous
- ☐ Aggregate data only
- ☐ Pseudonyms/Coded
- ☐ Real participant names with data attributable
- ☐ Other

Describe the identifiability of data that will appear in publications, including how pseudonyms will be assigned, if applicable. If there are different levels of anonymity for different groups, describe each level here. (Detailed instructions, Example)

*The results of this study may be published or presented at an academic conference or meeting, but the data will be anonymous only so that it will not be possible to identify any participant unless their prior consent is obtained.*

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**9D Data Storage (during the project)**

- ☐ Encrypted
- ☒ Password-protected
- ☐ Physical documents
- ☐ Other

How will data be stored and kept safe? Provide details for each type of data (e.g. raw data, contact lists, consent documents, anonymized data, recordings and images, electronic data and paper documents). (Detailed instructions, Example)

*Data are securely coded and will be stored on password-protected computer in Room No. 2116, Human Computer Interaction Building which the research team alone has access to.*

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**9E Data Disposition (after the project)**

- ☐ Stored
- ☐ De-identified data shared publicly
- ☐ Identifiable data shared publicly
- ☒ All identifiers/codes will be permanently deleted
- ☐ Returned to participants
- ☐ Destroyed

After project completion, describe whether and how the data will be stored for future use. If shared, with whom? If made public, how (e.g. online)? If archived, provide details. Describe any restrictions on access. Will personal identifiers be deleted and when? If data will be destroyed, when? Will participant contact information be kept for future recruitment? (Include data disposition plans in the consent materials) (Detailed instructions, Example)

*The participants' de-identified data will be retained for a period of one year and then securely destroyed. The participant's contact information will not be kept on file for future recruitment.*

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**9F Sharing Study Results**

- ☒ Results will be shared

Do you intend to share a report (or summary) of the research findings with participants once the study is complete? If yes, include this option in the consent form. (Detailed instructions, Example)

The results would be shared with the participants upon request in the consent form.

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**9G Data Breach Risks**

- ☐ No Risks

Describe the likelihood of a data breach and the resulting risks to participants. If risks are significant, how will they be mitigated? (Detailed instructions, Example)

*As the participants are anonymous in the study data the data breach risks are very unlikely.*

## 10. Funding and Approvals

**10A Project Funding**

- ☒ Unfunded
- ☐ Tri-Council Funded
- ☐ Other Award/Grant
- ☐ Contract Funded
- ☐ Personal Consulting or Personal Work
- ☐ Scholarship

Who is funding this project? If applicable, include the funding source/agency/company, program, award name, and number (from CUResearch). Note if the researcher applied for a release of funds for this project funding.

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**10B Researcher Funding (for research contracts and personal consulting only)**

- ☒ Not contract funded research
- ☐ No funds are paid directly to the researcher as personal income

For research that will pay personal income to any researcher: how will any resulting conflicts of interest be managed? How much funding (dollar amount and the percentage of the total) will the researcher(s) receive as income? Provide the title and date of any contracts. (The REB may review the contract.)

| | |
|---|---|
| ☐ | The researcher will receive a portion of the funds as personal income |
| ☐ | A copy of the contract/agreement has been submitted to the Research Compliance Office |

**10C Additional Approvals Required**

| | |
|---|---|
| ☒ | No other approvals required |
| ☐ | Organizational Permission |
| ☐ | Visa/Travel Permits |
| ☐ | Other REBs or Institutional Approvals |
| ☐ | Biohazards |
| ☐ | Animal Care Committee |
| ☐ | Permission letters attached |
| ☐ | Letters to follow |
| ☒ | Other (please specify) |

Is organizational permission required to conduct research (e.g., schools, employers, other universities, correctional services, indigenous communities, or other data collection locations)? If conducting research in another country, is local permission, including local ethics review, required? Indicate if permission/approval has been secured and provide a copy. Research with biohazards or animals must also secure approval from the appropriate committee at Carleton University.

**10D TCPS Tutorial**

| | |
|---|---|
| ☒ | Completed the online TCPS tutorial |
| ☐ | Have not completed the online TCPS tutorial |

TCPS CORE Tutorial training is required for all researchers listed on the protocol. Justify any cases where researchers have not completed the TCPS tutorial.

*All researchers have completed the TCPS*

## 11. Declarations

**11A Supervisor Approval**

| | |
|---|---|
| ☐ | Not applicable |
| ☒ | Supervisor Approved |

For student projects, please indicate the date that the supervisor approved the application. Such approval indicates that the supervisor has read the entire submission and associated documentation, and is satisfied that the project is appropriately prepared and meets applicable disciplinary and ethical standards. (Detailed instructions, Example)

*Supervisor has approved the application*

**11B Declaration #1**

| | |
|---|---|
| ☒ | I agree |

This ethics application accurately describes the research project or scholarly activity that I plan to conduct. (Detailed instructions, Example)

**11C Declaration #2**

| | |
|---|---|
| ☒ | I agree |

No recruitment or data collection for this protocol will commence before ethics clearance. (Detailed instructions, Example)

**11D Declaration #3**

☒ I agree

No changes will be made to the research project as described in this protocol without receiving clearance from the Research Ethics Board. (Detailed instructions, Example)

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**11E Declaration #4**

☒ I agree

The Research Ethics Board will be notified immediately of any alleged or real ethical breaches or concerns, adverse events, or participant complaints that arise during or after the course of this research project. (Detailed instructions, Example)

## 12. Comments

**12A Comments (optional)**

Do you have any comments or suggestions on the form?

# Research Consent Form

***CUREB-B Clearance # 106243***

**Name and Contact Information of Researchers:**

Yassaman Rezvani, Carleton University
Email: yassaman.rezvani@carleton.ca

Siju M. Philip, School of Information Technology, Carleton University
Email: siju.philip@carleton.ca

Chanpreet Singh, School of Information Technology, Carleton University
Email: chanpreet.singh@carleton.ca

**Supervisor and Contact Information**:

Dr. Audrey Girouard

Email: audrey.girouard@carleton.ca

**Project Title**

Evaluation of Input Modes for "BSAFE": Women's Wearable Safety Device

**Project Sponsor and Funder (if any)**

N/A

**Carleton University Project Clearance**

Clearance #: N/A Date of Clearance: N/A

**Invitation**

You are invited to take part in this research project because you have shown interest in this study and you are a female, 18 years of age or older, and speak English. The information in this form is intended to help you understand what we are asking of you so that you can decide whether you agree to participate in this study. Your participation in this study is voluntary, and a decision not to participate will not be used against you in any way. As you read this form, and decide whether to participate, please ask all the questions you might have, take whatever time you need, and consult with others as you wish.

**What is the purpose of the study?**

The main purpose of this research is to develop a reliable and easily accessible wearable safety prototype, BSAFE, and to evaluate the input modes, press and tap, that women prefer to use to interact with this system.

**What will I be asked to do?**

If you agree to take part in the study, we will ask you to:

- complete a pre-questionnaire in order to collect some demographics about you,
- wear the prototype consisting of a band with a press button or a tap surface on your nondominant hand. The tasks should be accomplished by using your dominant hand. You will be instructed to imagine that you are in a dangerous situation and should access the safety device and press the button or tap the surface to get help,
- complete the post-questionnaire after performing a series of above tasks.

The controlled experiment to test the hypotheses will take place in the Usability lab, HCI room 3111, at Carleton University, located in Ottawa, Canada. The experiment will take an hour to complete.

**Risks and Inconveniences**

The experiment involves emotional risks as the participants have to think of themselves in a distressed situation, those with past experiences with harassment or violence might consider it to be emotionally challenging. Regardless, we will emphasize that participation is completely voluntary and will not result in any negative consequences. If emotional distress occurs, we will refer participants to the appropriate Health Services.

**Possible Benefits**

You may not receive any direct benefit from your participation in this study. However, your participation may allow researchers to collect data needed to design and develop a usable, useful and efficient wearable safety device for women.

**Compensation/Incentives**

You will be compensated with a $5.00 Starbucks gift card for your participation in this study.

**No waiver of your rights**

By signing this form, you are not waiving any rights or releasing the researchers from any liability.

## Withdrawing from the study

The participants can only withdraw during the study session and they may request to one of the research team members that their data be removed and deleted after the data collection. Otherwise the data collected up to the withdrawal time can be used for the research.

## Confidentiality

We will treat your personal information as confidential, although absolute privacy cannot be guaranteed. No information that discloses your identity will be released or published without your specific consent.

Research records may be accessed by the Carleton University Research Ethics Board in order to ensure continuing ethics compliance.

The results of this study may be published or presented at an academic conference or meeting, but the data will be presented so that it will not be possible to identify any participants unless you give your express consent. You will be assigned a code, Id #, so that your identity will not be directly associated with the data you have provided. All data, including coded information, will be kept in a password-protected file in a secure computer. All research data, and any notes taken during the experiment will be encrypted. Any hard copies of data (including any handwritten notes or USB keys) will be kept in a locked cabinet at Carleton University. Research data will only be accessible by the researchers and the research supervisor.

## Data Retention

Your de-identified data will be retained for a period of one year and then securely destroyed.

## New information during the study

In the event that any changes could affect your decision to continue participating in this study, you will be promptly informed.

## Ethics review

This project was reviewed and cleared by the Carleton University Research Ethics Board B. If you have any ethical concerns with the study, please contact Dr. Bernadette Campbell, Chair, Carleton University Research Ethics Board (by phone at 613-520-2600 ext. 4085 for CUREB B or by email at ethics@carleton.ca).

**Study Results**

Would you like to receive the study results? ___Yes ___No

**Statement of consent – print and sign name**

I voluntarily agree to participate in this study. ___Yes ___No

_____ _____

Signature of participant Date

Research team member who interacted with the subject

I have explained the study to the participant and answered any and all of their questions. The participant appeared to understand and agree. I provided a copy of the consent form to the participant for their reference.

_____ _____

Siju M. Philip Date

_____ _____

Yassaman Rezvani Date

_____ _____

Chanpreet Singh Date

# PARTICIPANTS WANTED!

*CUREB-B Clearance # 106243*

Are you interested in Safety Wearables? We are currently recruiting female participants for a study to identify and evaluate the preferred input method using a wearable safety prototype. The tasks in this study include "pressing" and "tapping" on a band that can be worn on the wrist to interact with the safety device.

The study will take an hour to complete and you will be compensated with a $5 Starbucks gift card for participating. We are looking for female candidates 18 years of age or older, who can speak English. There are no anticipated risks in participating.

If you are interested and would like to sign up for this study, please feel free to contact:

Siju.Philip@carleton.ca / Yassaman.Rezvani@carleton.ca / Chanpreet.Singh@carleton.ca

The title of this study is "*Evaluation of Input Modes for "BSAFE": Women's Wearable Safety Device"* and is supervised by Professor Audrey Girouard. Should you have any ethical concern with the study, please contact Dr. Bernadette Campbell, Chair, Carleton University Research Ethics Board (by phone at 613-520-2600 ext. 4085 for CUREB B or by email at ethics@carleton.ca). For all other questions about the study, please contact the researchers listed above.

**Online Invitation**

*To be posted at: https://www.facebook.com/CarletonResearchParticipants*

**Participants needed for Safety Wearable Interaction Techniques study**

***CUREB-B Clearance # 106243***

Are you interested in Safety Wearables? We are currently recruiting female participants for a study to identify and evaluate the preferred input method using a wearable safety prototype. The tasks in this study include "pressing" and "tapping" on a band that can be worn on the wrist to interact with the safety device.

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If you are interested and would like to sign up for this study, please feel free to contact:

Siju.Philip@carleton.ca / Yassaman.Rezvani@carleton.ca / Chanpreet.Singh@carleton.ca

The title of this study is "*Evaluation of Input Modes for "BSAFE": Women's Wearable Safety Device"* and is supervised by Professor Audrey Girouard. Should you have any ethical concern with the study, please contact Dr. Bernadette Campbell, Chair, Carleton University Research Ethics Board (by phone at 613-520-2600 ext. 4085 for CUREB B or by email at ethics@carleton.ca). For all other questions about the study, please contact the researchers listed above.

# Appendix A: Pre-Questionnaire

**Date:** _____/_____/_____

**Participant Id**: _____ **Group Id:** _____

**CUREB-B Clearance # 106243**

Please fill in the blanks or place an X or check mark next to the word or phrase that best matches your response.

1. How old are you?

☐ 18-25 ☐ 25-30 ☐ 30-35 ☐ 35-40 ☐ 40-50 ☐ Above 50

2. What is your dominant hand?

☐ Left Hand ☐ Right Hand ☐ Ambidextrous

3. Have you ever used a Safety Wearable Device before?

☐ Yes ☐ No ☐ Not Sure

3.1. If 'Yes', how long have you used that device?

☐ Less than a month ☐ 1 month - 3 months ☐ 3 months - 6 months

☐ 6 months - 1 year ☐ more than 1 year ☐ Prefer not to answer

3.2. If 'Yes', how often have you worn your device?

☐ Everyday ☐ weekly more than two times

☐ weekly less than two times ☐ Prefer not to answer

3.3. If 'Yes', please specify the device.

☐ Sports & Fitness ☐ Healthcare & Wellness ☐ Security & Prevention

☐ Gaming & Lifestyle ☐ Prefer not to answer

3.4. How comfortable did you feel using the device?

Very uncomfortable 1 2 3 4 5 Very Comfortable

# Appendix B: Post-Questionnaire

**Date:** _____/_____/_____

**Participant Id**: _____ **Group Id:** _____

**CUREB-B Clearance # 106243**

I. Tell us about your experience of providing input using "TAP with FEEDBACK". Please mark the most appropriate one and answer the question below.

| | Very Unsatisfied | Unsatisfied | Neutral | Satisfied | Very Satisfied |
|---|---|---|---|---|---|
| a) Satisfaction Level | ◯ | ◯ | ◯ | ◯ | ◯ |
| b) Ease of Use | ◯ | ◯ | ◯ | ◯ | ◯ |
| c) Easy to Learn | ◯ | ◯ | ◯ | ◯ | ◯ |

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|---|---|---|---|---|---|
| d) During use, I feel confident | ◯ | ◯ | ◯ | ◯ | ◯ |
| e) Willingness to use the system in future | ◯ | ◯ | ◯ | ◯ | ◯ |
| f) Recommend to others | ◯ | ◯ | ◯ | ◯ | ◯ |

II. Tell us about your experience of providing input using "PRESS with FEEDBACK". Please mark the most appropriate one and answer the question below.

| | Very Unsatisfied | Unsatisfied | Neutral | Satisfied | Very Satisfied |
|---|---|---|---|---|---|
| a) Satisfaction Level | ◯ | ◯ | ◯ | ◯ | ◯ |
| b) Ease of Use | ◯ | ◯ | ◯ | ◯ | ◯ |
| c) Easy to Learn | ◯ | ◯ | ◯ | ◯ | ◯ |

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|---|---|---|---|---|---|
| d) During use, I feel confident | ◯ | ◯ | ◯ | ◯ | ◯ |
| e) Willingness to use the system in future | ◯ | ◯ | ◯ | ◯ | ◯ |
| f) Recommend to others | ◯ | ◯ | ◯ | ◯ | ◯ |

III. Tell us about your experience of providing input using "TAP with FEEDBACK" and "PRESS with FEEDBACK".

1. Between "TAP with FEEDBACK" and "PRESS with FEEDBACK", which one do you prefer ?

| | | | |
|---|---|---|---|
| Strongly prefer "TAP with FEEDBACK" | ◯ | Slightly prefer "PRESS with FEEDBACK" | ◯ |
| Strongly prefer "PRESS with FEEDBACK | ◯ | Slightly prefer "TAP with FEEDBACK" | ◯ |
| Have No preference | ◯ | Not prefer to say | ◯ |

2. Why do you have this preference

_____

_____

3. Where on body, would you prefer to wear a safety device ?

_____

_____

4. Do you consider this device to be reliable in a distressed situation?

_____

_____

PANEL ON RESEARCH ETHICS

*Navigating the ethics of human research*

**TCPS 2: CORE**

# *Certificate of Completion*

*This document certifies that*

**Siju Philip**

*has completed the Tri-Council Policy Statement:*
*Ethical Conduct for Research Involving Humans*
*Course on Research Ethics (TCPS 2: CORE)*

Date of Issue: **22 February, 2019**

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RESEARCH ETHICS
*Navigating the ethics of human research*

**TCPS 2: CORE**

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**chanpreet singh**

*has completed the Tri-Council Policy Statement:*
*Ethical Conduct for Research Involving Humans*
*Course on Research Ethics (TCPS 2: CORE)*

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**Yassaman Rezvani**

*has completed the Tri-Council Policy Statement:*
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