

Project Title

# Laser Tag using Narrow Beam Infrared Radiation

08/16/2020

id. 17234510

by **Justin Wylie** in **EBE Electrical Submissions Undergraduate**

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## Original submission

08/16/2020

Project Aims	<b>Develop a Laser Tag system consisting of a tagger and target. The system is to function in a similar fashion to commercial-grade systems. The investigation will focus on beam development, information encoding and beam receiving. Supporting circuitry is also to be developed.</b>
Ethical Issues	<b>No ethical issues are involved. The project is not tested on humans nor will any surveys performed.</b>
Application Checklist	<b>Read the EBE Ethics in Research Handbook before completing this application Questionnaire to be used in the research (where applicable) Consent form where (where applicable see Addendum 2) If needed a letter motivating an expedited review. This letter should be included in the cover letter.</b>
Researcher(s)	<b>Justin Michael Wylie</b>
Department	<b>Electrical Engineering</b>
E-mail	<b>wyljus002@myuct.ac.za</b>
Status of Applicant	<b>Student</b>
Degree Being Studied (For Students Only)	<b>MSc</b>
Name of Supervisor (For Students Only)	<b>Dr. Simon Winberg</b>
Review Track	<b>Normal</b>
Motivation for an Expedited Review	<b>n/a</b>

Completed Ethics Application Form

[EBE\\_EiRC\\_Ethics\\_Form\\_Justin\\_signed.pdf](#)

SECTION 1: n/a  
Overview of ethics  
issues in your  
research project

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Question 1: Harm to  
Third Parties **No**

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Question 2: Human  
Subjects as Sources  
of Data **No**

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Question 3:  
Participation or  
Provision of  
Services To  
Communities **No**

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Question 4: Conflicts  
of Interest **No**

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**If you have answered YES to any of the above questions, please ensure that you append a copy of your Research Proposal (Addendum 1), as well as any interview schedules or questionnaires and consent documentation (Addendum 2) and complete further addenda as appropriate.**

**I hereby undertake to carry out my research in such a way that:**  
**1. there is no apparent legal objection to the nature or the method of research; and**  
**2. the research will not compromise staff or students or the other responsibilities of the University;**  
**3. the stated objective will be achieved, and the findings will have a high degree of validity;**  
**4. limitations and alternative interpretations will be considered;**  
**5. the findings could be subject to peer review and publicly available; and**  
**6. I will comply with the conventions of copyright and avoid any practice that would constitute plagiarism**

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ADDENDUM 1 n/a  
Supporting  
documents

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Research Proposal

[FINAL\\_Laser\\_Tag\\_Proposal.pdf](#)

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ADDENDUM 2 To be completed if you answered YES to question 2 in section 1

It is required that you read the [UCT Code for Research involving Human Subjects](#) in order to be able to answer the questions in this addendum.

**Ethical research should safeguard the interests of society and the welfare of all who participate in the research, be they individuals or groups. In this section the researcher is asked to consider the implications of their research on participants in the research. The researcher should outline risks that participants will face by being involved in the research.**

**When a research involves vulnerable people, a researcher is expected to obtain informed consent from participants. This informed consent should be signed by the participants. Informed consent is intended to protect the interest of both participants and the researcher should something go wrong or should conflict arise between the researcher and the participant.**

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Question 2.1: Discrimination	n/a
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Question 2.2: Participation of socially or physically vulnerable people	n/a
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Question 2.3: Informed consent	n/a
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Question 2.4: Confidentiality	n/a
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Question 2.5: Anonymity	n/a
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Question 2.6: Risks of physical, psychological or social harm	n/a
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Question 2.7: Payments and giving of gifts	n/a
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Interview Schedule	n/a
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Consent Form	n/a
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Additional Comments	n/a
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ADDENDUM 3 To be completed if you answered YES to question 3 in section 1	<b>Research may sometimes interfere with the organization, progress or advancement of communities. In this section the researcher is asked to consider the effect of their research on a community or communities involved in the research. Attention should be paid to whether the research will disrupt or interrupt the normal activities of the community and how the research will influence communities in the long term.</b>
Question 3.1: Community participation	n/a
Question 3.2: Termination of economic or social support	n/a
Question 3.3: Provision of sub standard services	n/a
Additional Comments	n/a
ADDENDUM 4 To be completed if you answered YES to question 4 in section 1	<b>A conflict of interest may compromise the conduct or outcome of a research project. It may also infringe on the interests of other researchers. In this section the researcher is asked to consider if their research may be compromised by the inclusion of certain individuals or groups in the research. The researcher is also asked to consider whether the inclusion of certain individuals or groups in the research will compromise the research of others at the university. For example, if any participants in the proposed research project are also involved in other projects at the university, have you considered if this participation will negatively affect their work?</b>
Question 4.1: Conflicts of interest	n/a
Question 4.2: Sharing of information	n/a
Question 4.3: Conflict of interest with other research	n/a
Additional Comments	n/a