

School of Computing and Information Systems
Melbourne School of Engineering

PhD in Human-Computer Interaction (Technology and Ageing)

Position Summary

Expressions of interest are sought from students wishing to undertake doctoral research focusing on the design and use of emerging technologies to support social and emotional enrichment in old age. The doctorate will be undertaken under the primary supervision of Dr Jenny Waycott. The successful candidate(s) will join the Interaction Design Lab (IDL) at the University of Melbourne and are expected to make a strong contribution to the research program and culture of scholarship in this lab. For more information about the research undertaken in IDL see: <http://www.cis.unimelb.edu.au/research/groups/interaction-design/>

The overall goal of the *Emerging Technologies for Enrichment in Old Age* research program is to generate knowledge about older adults' experiences with emerging technologies used for social and emotional enrichment. Technologies like virtual reality, social robots, and online games are said to offer social benefits for those in advanced old age. But we have limited knowledge about the issues that can benefit or impede older adults' experiences with these technologies and even cause harm for vulnerable users. Through in-depth investigations, this research program seeks to identify empirically informed strategies for good practice in the design and deployment of emerging technologies for enrichment in old age. Knowledge generated will inform the future ethical design and use of emerging technologies to benefit the social and emotional wellbeing of older adults, particularly those in advanced old age.

The successful candidate(s) are expected to develop independent research project(s) that align with this program of research. Possible research topics include:

- 1) An ethnographic study of aged care settings, focusing on the use or potential use of emerging technologies (e.g., virtual reality or social robots) for improving the life and wellbeing of aged care clients;
- 2) An investigation into the opportunities and challenges of using virtual reality as diversional therapy in aged care. This project could involve the design and evaluation of VR experiences;
- 3) An investigation into the companionship needs of older adults and the potential for social robots to provide companionship/support in old age;
- 4) An investigation into the ethical concerns associated with deploying emerging technologies for social/emotional enrichment in old age.

1. Expected Experiences and Qualifications

Students interested in undertaking this research are expected to have the following qualifications, skills, and experiences:

- A Master degree in one of the following fields (or related discipline): Interaction Design, Human-Computer Interaction, Psychology, Anthropology, or Health Sciences (e.g., ageing or social work). Students who are still undertaking their Master degree should expect to complete the program by November 2018. Candidates *may* be considered if they do not have a Master's degree but hold a degree from a four-year undergraduate program that involved a year-long research component;
- Experience conducting human subjects research, especially qualitative research (e.g., interviews, thematic analysis);
- Strong academic results (i.e., high grade point average), as demonstrated in academic transcripts, that would be competitive for securing a scholarship (see <http://www.eng.unimelb.edu.au/study/degrees/phd/fees-scholarships>);
- Genuine passion for, and interest in, conducting human-computer interaction research in the area of technology and ageing;
- Technical skills to undertake the proposed project (e.g., ability to develop interactive prototypes or VR experiences, if required for the specific project you plan to undertake);
- Strong communication skills, including a high standard of written and spoken English, as the research will involve extensive work with stakeholders and participants, as well as the preparation of academic publications.

2. Application process

To express your interest in being considered for this PhD program, please contact Dr Jenny Waycott (jwaycott@unimelb.edu.au) with the following information:

- A short statement explaining how you meet the expected experiences and qualifications outlined above;
- Your CV and academic transcripts;
- A two-page outline of your proposed research, providing background to the topic (i.e., *what is the problem?*), aims and research questions (*what will you investigate?*), and proposed method for conducting your research (*how will you answer the research questions?*). This proposal should demonstrate your reading about the topic and include references to selected scholarly literature. Please note that this is not expected to be a final proposal; if you are shortlisted, the proposal will be refined following discussions with your supervisor(s);
- A sample of your academic writing (e.g., a chapter from your Master's thesis or a written university assignment).

If you are shortlisted based on the information received, you will be invited to attend an online meeting to further discuss the proposed project. If, following one or more discussions, the supervisor is satisfied that you meet the expectations above and that your proposed project aligns with the research program, you will be asked to submit a formal application to the Melbourne School of Engineering Doctor of Philosophy program: <http://www.eng.unimelb.edu.au/study/degrees/phd/overview>

Expressions of interest will be accepted throughout 2018, but successful students are expected to submit a formal application in time to be considered in Rounds 1 or 2 of the

Melbourne School of Engineering scholarship rounds (deadlines are early September and October).

Starting date: Successful applicants should be available to start in Jan/Feb 2019.

3. Funding

This PhD program is **not** funded by external project funding. However, eligible students are expected to apply for a Melbourne Graduate Research Scholarship. For more information about these scholarships, please see:

<http://www.eng.unimelb.edu.au/study/degrees/phd/fees-scholarships>

4. Further information

For further information, please contact Dr Jenny Waycott: jwaycott@unimelb.edu.au.