

Indoor temperature profile and the relationship between indoor and outdoor temperatures in urban residential settings

QUT Ethics Approval Number 1700000192

RESEARCH TEAM

Principal Researcher: Mr Akwasi Bonsu Asumadu-Sakyi PhD student
Associate Researchers: Prof Lidia Morawska Principal Supervisor and Director
Dr Phong Thai Associate Supervisor
Prof Adrian Barnett Associate Supervisor

**International Laboratory for Air Quality and Health (ILAQH)
Science and Engineering Faculty
Queensland University of Technology (QUT)**

DESCRIPTION

This project is being undertaken as part of the PhD research for Akwasi Bonsu Asumadu-Sakyi.

The purpose of this project is to monitor the indoor temperature profile and determine the association between indoor and outdoor temperature in residential settings.

To accomplish our aim, we are recruiting residential houses in different residential suburbs, where indoor and outdoor temperatures will be simultaneously and continuously measured with temperature sensors shown in Fig.1. The temperature sensors will be installed in the living room and the immediate outdoor surrounding of the house by the researcher. Findings will lead to new scientific understanding on temperature exposure and energy conservation/efficiency in residential settings and therefore will be disseminated in international journals. This research will also inform residents on how much the indoor temperature in compares to the outdoor temperature.

You are invited to participate in this project if you are:

- Aged 18 years or older.
- Residing in an accommodation for at least a year.

PARTICIPATION

Your participation will involve:

- Assisting the researcher to fill a simple questionnaire about the characteristics of your house which are related to temperature. It's anticipated this will take approximately 10 minutes of your time
- Download logged data onto your computer and email it to the principal researcher every three months, this will take about 5 minutes of your time per each download session



Fig.1. Labjack digit temperature sensor

Your participation will be confidential and the information provided will be anonymous. Your participation in this project is entirely voluntary. If you do agree to participate you can withdraw from the project without comment or penalty any time by giving the Researcher a prior notice. Your decision to participate or not participate will in no way impact upon your current or future relationship with ILAQH or QUT.

EXPECTED BENEFITS

It is expected that this project will benefit you directly. Data from this study will help you understand how outdoor temperature influences indoor temperature in your home thereby presenting information such as how building characteristics influence indoor temperature; and as well as the impact of indoor temperature changes on energy consumption.

RISKS

The only identified potential risk for you is inconvenience which includes devoting a small amount of time to assist the researcher complete a questionnaire on the characteristics of your house and download data onto your computer, and email the data every three months.

The inconveniences will be minimized through the following:

- You will be given instructions on how to download the data from the sensors.
- You will be asked to contact the researcher in case of software issues.
- You will have the option to opt-out of the research in case of any inconvenience.
- Extra-time will be given to send the data if it is not emailed within the expected period.

PRIVACY AND CONFIDENTIALITY

All data and information collected in this research are anonymous and will be treated confidentially unless required by law. The names of individual persons are not required in any of the responses.

Any data collected as part of this project will be stored securely as per QUT's Management of research data policy for minimum period of 5 years after completion of this research. Please note that non-identifiable data from this project may be used as comparative data in future projects.

CONSENT TO PARTICIPATE

The return of the consent form is accepted as an indication of your consent to participate in this project.

QUESTIONS / FURTHER INFORMATION ABOUT THE PROJECT

If you have any questions or require further information, please contact one of the listed researchers:

Akwasi Bonsu Asumadu-Sakyi	akwasibonsu.asumadusakyi@hdr.qut.edu.au	
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CONCERNS / COMPLAINTS REGARDING THE CONDUCT OF THE PROJECT

QUT is committed to research integrity and the ethical conduct of research projects. However, if you do have any concerns or complaints about the ethical conduct of the project you may contact the QUT Research Ethics Advisory Team on 3138 5123 or email humanethics@qut.edu.au. The QUT Research Ethics Advisory Team is not connected with the research project and can facilitate a resolution to your concern in an impartial manner.

**THANK YOU FOR HELPING WITH THIS RESEARCH PROJECT.
PLEASE KEEP THIS SHEET FOR YOUR INFORMATION.**