



MESTECH Research Project



Project Title:

Smart environmental monitoring systems for buildings using sensing and traffic data

Project Researcher:

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Funding Body:

MESTECH, Clarity, Energy Design Lab

Project Summary:

This project involves the deployment of cheap off-the-shelf sensors at high spatial frequency in a building. The building is used by large numbers and there is a continuous change of occupants over an 8-hr period. The work will involve the investigation the best deployment options to get representative sensor readings (temperature for example), building layout issues that affect sensor deployments, data collection and management issues, human traffic monitoring using smart technologies and integration of traffic data with collected sensor data. The integration of this information with building management and timetabling will be investigated.

The overall aim is to develop an information based heating system that utilises output from the timetabling system to develop a control system that is able to adjust the heating needs for a room based on current and future demands. This system should be flexible enough to be able to respond to adjust to changes in the daily timetable for each individual room.

Key Outputs:

- Possible energy saving costs
- Benefit of using off the shelf sensors in energy management
- Publications and contribution to knowledge in the area of energy management