Seminar: Title TBA

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Abstract

With society trending towards smaller and simpler objects being connected to the internet (the "Internet of Things"), we are seeing renewed scientific interest and progress in a variety of sensing fields. One such field is that of occupancy detection; the science of determining the number of occupants in a surveilled space. A current research gap in the area is an occupancy sensor that would be suitable for a consumer smart home, with particular emphasis on smart homes for the elderly and disabled. Such a sensor has quite specific requirements with regards to cost, energy efficiency, reliability and of course privacy.

In this talk we present our survey of the different occupancy sensing techniques, and our reasoning behind opting for an infrared-based solution. We also present a prototype infrared occupancy detection system with both hardware and software components. Using this prototype, we perform a series of experiments to determine the prototype's effectiveness