



originalthinking

Contributing to sustainability.

Our teaching, research and campus activities have real impact

ErgoHomes on Campus in 2010 - Contributing to Sustainability

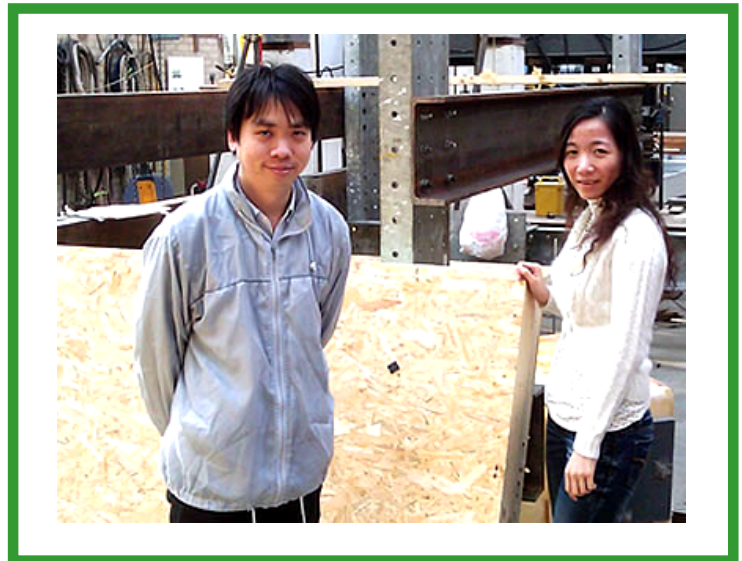
The University of Birmingham is actively supporting ErgoHome in a prefabricated building concept that aims to reduce energy use & increase housing affordability. The School of Engineering has two PhD researchers actively involved in the project.

Pictured here are Prathan & Vinh in the test laboratory shown with the innovative structural & insulated panels (SIPs) used in the project.

- Prathan is making structural analysis of the panels.
- Vinh is evaluating the performance of the whole house for solar characteristics.

Comment from the postgraduates:

"It's great to be involved in something that could make a significant impact on global warming, findings from our studies will contribute to better homes being made & importantly more affordable homes for younger people like us. It's also great to see different parts of the University combining their efforts towards a greater aim"



Real world measurements compared to computer modelling

The pair of campus test buildings will be used to validate computer simulations for passive solar design. Continuous monitoring of the buildings through the seasons will provide a depth of information against which the computer model can be optimised. Once the software model reflects the real world outcomes then different home orientations & shading treatments can be explored in a virtual world with improvements directly fed back into the test units.

Solar energy capture for lower carbon footprint

The two ErgoHomes although un-occupied will be set-up to simulate real life use, with controlled temperature & ventilation, one unit more exposed to solar gain & the other comparatively shaded to provide a comparison for energy consumption. In addition the "sunny" unit will exploit renewable energy panels whereas the shaded unit will not, this will enable a scientific comparison of the financial savings possible through best use of solar gain & renewable technologies.

20th January 2010