

**TUNG FAI YU**

## **THE HUMAN GAIT IN DIGITAL FORM**

POSITION

**RESEARCH STUDENT**

**PHYSICS, UNIVERSITY OF WARWICK**

RESEARCH AREA

**TRANSLATIONAL MEDICINE**

What does the image show?

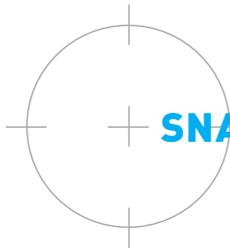
It was taken during an experiment in the Motion Capture Laboratory in the University of Warwick. The motion capture system uses 12 cameras to track reflective markers placed on a person. A computer collects the videos and uses them to calculate the position of each marker, allowing it to build a digital model of the person. In the picture on the left you can see white trails created by the markers, these highlight the path each body part takes and identical paths are shown by the blue lines for the digital model on the right. These paths during motion are different for every person, and these differences help us to understand how different people move.

How is the work you are doing relevant to everyday life?

Apart from medical research, motion capture technology is also used in many other ways. It helps in the making of computer generated movies and games, making the characters move as humans would do. It is used to help sportsmen and sportswomen study their own motion in detail, helping them to be faster and more efficient. Many motion capture laboratories in the UK are helping athletes to prepare for the London 2012 Olympics.

What does your research hope to achieve?

My research involves studying human balance. With measurements from the motion capture laboratory we are developing an electronic muscle control system. It will allow people who have lost use of their legs to stand.



**SNAPSHOTS OF SCIENCE 2010**