

### Is it natural? The Physics of Perception

Human beings find it quite easy to distinguish between natural and synthetic materials, so what processes enable us to make this distinction? How do we so easily know wood from vinyl or cotton from nylon?

A unique multidisciplinary team of researchers is trying to find the answer, creating what would be the first predictive model of our perception of naturalness.

“Our senses combine to identify natural materials”, explains Ruth Montgomery of the National Physical Laboratory. “But what are the key factors, is it colour, gloss, texture, temperature? This is what our research is trying to establish.”

*Can you tell that something is natural just by looking?*



The team includes neuroscientists who scan the brain activity of individuals as they examine different materials; psychologists who measure the way people react to different materials when they use their hands or eyes or both and the National Physical Laboratory who contribute expertise in making hard physical measurements of the properties of different materials.

“The focus of the research is wood and fabric, but once the data is combined the aim is to produce a predictive computer model that will work for other materials”, says Ruth Montgomery.

The Exhibition was very enjoyable and it was very interesting to learn about each of the different topics, and how they would influence our future.

*Aarti Shah, 12/3J*