**Ille C. Gebeshuber**

*50 words bio, 50 words on GPS, 5 biomimetic questions on bees*

BIO

Ille C. Gebeshuber is a European physics professor currently living and working in tropical South East Asian Malaysia. The inspiration for her work in biomimetics comes from rainforest expeditions she does with her PhD students from fields as diverse as veterinary sciences, economy, the fine arts, engineering, physics and biology.

GPS

Bees have an in-built navigation system that relies on the polarization of the skylight that changes throughout the day. They see such polarization information. Inspired by the bees, we were constructing a prototype for a device that can assist people in navigation at times when GPS is not available.

FIVE BIOMIMETIC QUESTIONS ON BEES

How can the unfolding of the bee wing inspire lunar stations?

What can we learn from the beautiful iridescent colours of the bee wing regarding colours without dies and metallic effects without using metals?

Bees do it and elephants do it, too. They find water. How? They do it with the coolest devices such as polarization detectors and infrasound locators! Ille, please tell us about your newest concept development – a micromechanical system that helps people find water in the desert.

How can dancing bees teach us to build less noisy cars?

Algae are making glass, and bees and bacteria are making magnets. What can we learn from them for new, more sustainable approaches to engineering?