

Tim Constantinou

Student

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Personal Profile

Tim was born in England, but both his parents are Greek Cypriots.

Research Profile

Tim planned to develop a tiny implant chip for the inner ear for people who have a problem with... with their balance.

This idea basically initiated from a past project his colleagues worked on - a cochlear implant chip, for born deaf children.

The vestibular (or balancing) system has three fluid filled canals that right angles to each other so it's for the y, z, x plain and in the centre they have the same hair cells. So, as we move around, these hair cells bend and sense to the brain how we're moving.

Now, what we do is put tiny little micro-electrodes inside that fluid filled cavity... we reproduced all the mechanics.

In other words, instead of the fluid filled canals we make our own acceleratometers and gyroscopes to actually stimulate the ear's hair cells so we can send a signal to the brain the same way the vestibular system did.