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# Human Echolocation

A practical skills workshop to introduce you to human echolocation, to learn basic echolocation techniques and to learn techniques for teaching others.

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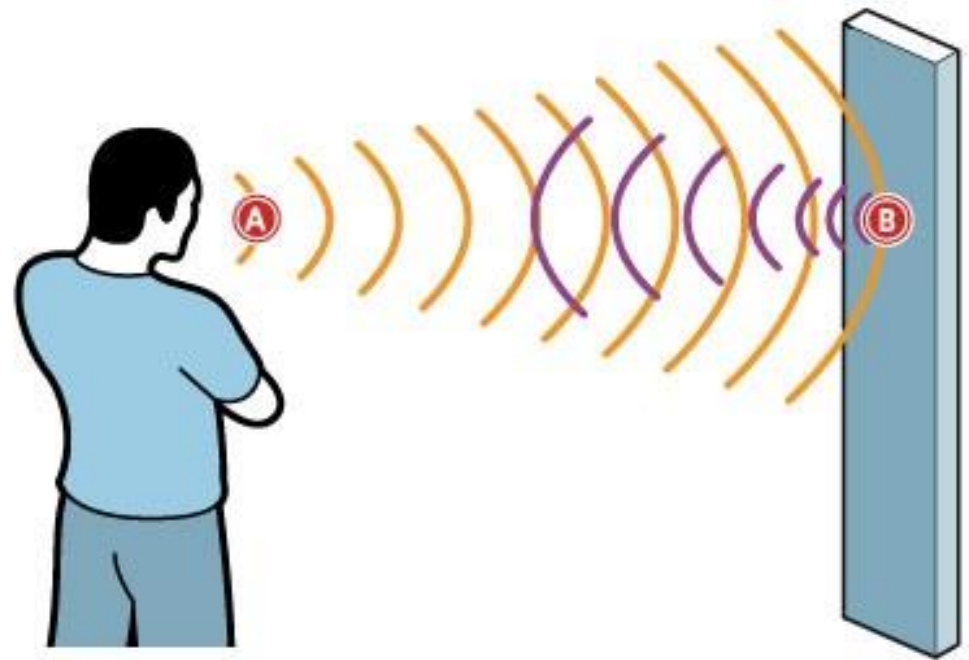
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# Overview of this Workshop

- Introduction to Human Echolocation
- Practical Exercises

# The ability to use sound reflections to get information about space

Everyone can learn to echolocate



**A** The echolocator uses his tongue and mouth to create clicking sounds.

**B** Sound bounces off object. A practiced echolocator can identify objects around him by the echo, much like bats do.

# Echolocation in People

Echolocation can be split into three categories:

- **Passive**, i.e. when you use echoes arising from the Ambient sound field (sounds arising from traffic, other people)
- **Active**, i.e. when you make your own sound and use echoes from these Self-Generated sounds (whistling, mouth clicking, speech, finger snaps, cane taps, foot steps, etc.)
- **Hybrid**, i.e. mixture between active and passive, such as use of Sensory substitution devices (e.g. i-glasses, K-sonar)

# Research has shown benefits of active, Click-Based Echolocation for people with vision impairments

- Sensory
- Cognitive (Spatial Competency)
- Mobility

# Why Mouth Clicks?

- Offers a head-level perspective (as opposed to cane/dog which focus more on ground level)
- Good position in between the ears!
- hands free
- no interference with breathing
- Can be modulated depending on the situation

# Echolocation and Vision Loss

- People with VI are generally better at perceiving echoes, even if they do not echolocate (Kolarik et al., 2014; Dufour et al., 2005)
- **But**: Research by us (and others) shows that to successfully echolocate one needs to practice!

# Echolocation Workshops

- 1-day workshops
- Free to attend; all ages; for people with VI or fully sighted, Mobility professionals, Rehab workers, Teachers, Teaching Assistants, etc.
- Throughout the UK June – October 2018
- Find currently scheduled workshops at link below. We can also do a workshop at your venue
- <http://community.dur.ac.uk/echolocation/workshops.html>



Now on to practical examples

Please everyone take a handout. Then  
we can start.