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# Multisensory Experience Lab (ME-Lab)

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## About

The [Multisensory Experience Lab](#) is based in Copenhagen, and is part of the facilities of Aalborg University in Sydhavn. In the Multisensory Experience Lab we work on virtual reality and multisensory experiences, exploring the combination of different input and output modalities in interactive applications. We are interested in both development of novel hardware and software technologies as well as evaluation of user experience. We apply our technologies to health, rehabilitation, education and entertainment.

We are particularly interested in researching topics related to sonic interaction design for multimodal environments, simulating walking experiences, sound rendering and spatialization, haptic interfaces, cinematic VR and evaluation of user experience in multimodal environments.

## Equipment

- Oculus Rift HMDs: 3 x Oculus CV1, touch controllers, 2 x DK2, 1 x DK1
- 2 x HTC Vive (1 with Pupil Lab eye-tracking)
- Driving simulator equipment. A setup including steering wheel, pedals and shifter, a Buttkicker (vibrotactile feedback)
- Naturalpoint MoCap system
- 3DUI-equipment: Leap Motion, Novint 3D Haptic Mouse etc.
- 64-speaker wave field synthesis (WFS) system
- Anechoic chamber and recording equipment

## Industrial / Academic collaborations

The lab is collaborating with danish companies such as Bruel & Kjaer, Bang & Olufsen, EduLab, Danish Electronics, Light and Acoustics (DELTA), and with several universities thanks to the European networks such as the upcoming European Art-Science-Technology Network for Digital Creativity (EU H2020, 2017-2021) and the sound and music computing network ([www.smcnetwork.org](http://www.smcnetwork.org)).

## Current research projects

- European Art-Science Technology Network (Large Scale EU Culture Project, 2017-2021)
- NIME young composers, in collaboration with [Figura ensemble](#) and [Troy Rogers](#).
- Training of Everyday Skills for Children Using VR (in collaboration with Rødovre Municipality, 2017-)
- Mathematic and Music Training in VR and AR (in collaboration with [EduLab](#), 2017-2020, supported by Innovation fund).
- Virtual Reality for Physical Rehabilitation (in collaboration with Frederiksberg Municipality, 2016-)