

Master Thesis

Sound Design for Medical Robotics

Background:

Consequential sounds resulting from moving parts of products influence how a product is perceived regarding concepts like safety and capability. Active sound design is already a well-established discipline in e.g. the automotive industry, where synthesized sound material is added to a car's engine sound. Less research can be found regarding sound design for robotic movement, especially in specific contexts like medical robotics.

Tasks and Objectives:

- Literature research on sound design, movement sonification and consequential sounds in the context of (medical) robotics
- Systematic development of sound profiles for a robot in medical contexts
- Design, conduction and analysis of a user study to evaluate the developed sound designs
- Data collection, evaluation and interpretation

Requirements:

- Interest in human-robot-interaction and sound design
- Proficiency in data collection, statistical analysis and interpretation
- Experience in digital processing of sounds or sound design is a bonus
- Good English language skills

Start date: as soon as possible
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Contact person:
Sarah Feigl
sarah.feigl@tum.de
Room MW 3305