

Sound-source Localisation using a  
Microphone-array for NUbots  
Interim Report

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# Chapter 1

## Literature Review

### 1.1 Methods

#### 1.1.1 Overview

A survey [1] attempted to give a state of the art of sound-localisation in robotics. It dealt with two main areas, namely binaural approaches and array-based approaches. Since an array of microphones will be used, the latter area is most relevant. All the approaches of which that the survey explored were listed as such:

- MUSIC,
- correlation, and
- beamforming.

# Chapter 2

## Simulation

# Bibliography

- [1] S. Argentieri, P. Danès, and P. Souères. A survey on sound source localization in robotics: From binaural to array processing methods. *Computer & Speech Language*, 34(1):87–112, 2015.
- [2] Caleb Rascon and Ivan Meza. Localization of sound sources in robotics: A review. *Robotics and Autonomous Systems*, 96:184–210, 2017.