

The remit of the team

Problem

Strictly does not need to
help the competition.

Mainly embedded

Modest goals

Ideal goals

A very difficult environment
would be a hall of people in
RoboCup.

Machine-learning and
binaural

Explain the methods briefly

Intuitive and naive

Similar to convolution

Peak

Complexity is N^2

FFT can simplify to $N\log(N)$

PHAT can improve

The sample period

Peak at zero

One of the few examples
that can estimate distance
Some other techniques
Paper says that it is
reasonably accurate

Traditional

Steering

Cross-correlations can be
used.

Spatial filter

Directions, Multiple signals

SRP-PHAT

Grid

Particle filter

Fine grid

Errors

Not considered much

Subspaces

Kinds

Resolution and computation

Decomposition

Subspaces

Similar to beamforming

Quick example

Real-time

Equations

Iterative algorithm

Not very good since it tends
to fail a lot

Full coordinates

GCC-PHAT problem

Grid

Only a coarse grid is used

Resolution is affected

Around 30 papers
considered.

Had not had as much
simulations as hoped.

In winter, the simulations
will be done.

Choose a method.

Realistic environment.

In the next semester, the
designing and testing will be
done.

Electronics

Software

Testing, Robotics context