

rtAIM:

a real-time implementation of the auditory image model of auditory periphery

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- Introduction
- The auditory image model
- A real-time implementation
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Introduction





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The auditory image model: overview

- pre-cochlear processing
- basilar membrane motion
- neural activity pattern
- strobing
- stabilised auditory image
- size-shape-covariant auditory image

C N B H

The auditory image model: the ear





C N B H

The auditory image model: the cochlea



C N B H

The auditory image model: basilar membrane motion



N B H

The auditory image model: basilar membrane motion



C N B H

The auditory image model: strobing



C N B H

The auditory image model: strobing



TU/e



N B H

The auditory image model: stabilised auditory image



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- Continuous processing
- Real-time
- Object-oriented design, cross-platform, open source

Conclusion



- AIM largely implemented
- Works in real-time
- Verification still pending

Current activity:

- Finish, document, verify
- Speech-recognition pre-processor

Questions

