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Blind wayfinding with physically-based liquid sounds

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#### ACCEPTED MANUSCRIPT

### Highlights

- A sensory substitution algorithm based on a liquid sound model is proposed
- The algorithm is tested in a blind wayfinding experiment with 14 participants
- Results indicate superior navigation accuracy compared to the vOICe algorithm
- The delivered sounds are positively rated as intuitive and pleasant
- The results should be applied to the visually impaired population with caution

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