# Handout Document Workshop ‘Sonification for Access to Information’

**Facilitator: Phia Damsma**

This document provides links to the resources mentioned in all talks, as well as presenters’ contact details. Feel free to use these contact details to reach out to the presenters after the workshop with any questions you may have. Or take the opportunity to engage live with them during the Q&A.

## **Introduction**

What is sonification; In what fields and what ways is this emerging technology currently being applied;

## Shared Resources

1. “Planetary Bands, Warming World”

Link: <https://www.openculture.com/2015/05/music-for-a-string-quartet-made-from-global-warming-data.html>

Created by Daniel Crawford and Scott St. George, graduate fellow and professor at the University of Minnesota, Minneapolis, USA. Played with permission from the author.

1. Publishing with “inline” or integrated sonification:

*Biophysics Sonification*, Carla Scaletti e.a. ACS Publications - Journal of Chemical Education. Vol. 99, 3, March 2022

Link: [https://pubs.acs.org/doi/full/10.1021/acs.jchemed.1c00857#](https://pubs.acs.org/doi/full/10.1021/acs.jchemed.1c00857)

1. Listen to Wikipedia, a real-time sonification of Wikipedia edits.

Link: <http://listen.hatnote.com/>

Read more about this project:

<http://blog.hatnote.com/post/56856315107/listen-to-wikipedia>

Built by Hatnote: Stephen LaPorte and Mahmoud Hashemiz

1. Loud Numbers: a data sonification podcast.

By Duncan Geere and Miriam Quick

Link: <https://www.loudnumbers.net/>

Also on Spotify. They include full transcript of each episode.

Link to ‘Tasting Notes’ episode:

<https://anchor.fm/loudnumbers/episodes/Tasting-Notes-e12jab3>

Contact: numbersloud@gmail.com

June 2021 episode: Tasting Notes: Beer-tasting with professional ‘cicerone’ Malin Derwinger.

1. Vision Australia QR code reader which uses sonification to indicate when you come close to the QR code:

<https://www.visionaustralia.org/community/news/2021-08-24/qr-code-advice-people-who-are-blind-or-have-low-vision?msclkid=a8c1a805b57311ec85958c24a20820eb>

1. Infosonics: Accessible Infographics for People who are Blind using Sonification and Voice.

Link to article: <https://dl.acm.org/doi/10.1145/3491102.3517465> Authors: Leona M Holloway Cagatay Goncu Alon Ilsar Matthew Butler Kim Marriott. CHI '22: CHI Conference on Human Factors in Computing Systems. April 2022 Article No.: 480. Pages 1–13 <https://doi.org/10.1145/3491102.3517465>

## Feature Talks

### Presenter 1: Dr Chatai Goncu.

**Title: Action Audio: Making sports broadcasts more accessible to people living with blindness or low vision.**

Dr Cagatay (Chatai) Goncu is a Data Engineer at Tennis Australia Game Insight Group and an adjunct research fellow at Monash University. His interests are in human computer interaction, sport analytics and machine learning. He received his PhD in computer science from Monash University in 2012, followed by a post-doctoral DECRA fellowship in the Inclusive Technologies group at the Department of Human Centred Computing.

Contact: chatai.goncu@tennis.com.au
Website: <https://action-audio.com>

### Presenter 2: Dr Chris Harrison.

**Title:** **The Making of 'Audio Universe Tour of the Solar System' (an accessible planetarium show).**

Dr Chris Harrison is an astronomer based at Newcastle University in the United Kingdom. He is the director of 'Audio Universe' which is a project exploring how to use sonification for astronomy research and education. The goals are to use sound to enhance scientific discovery and to make astronomy more accessible.

Contact: christopher.harrison@newcastle.ac.uk
Website: [www.audiouniverse.org](http://www.audiouniverse.org)

### Presenter 3: Jennifer Kotler.

**Title: ‘Create with Light – Student Art with Data Sonification**

Jenn Kotler is the user experience designer at the Mikulski Archive for Space Telescopes in the USA. She is working to make space telescope data more accessible so people can do amazing science.

Contact: jkotler@stsci.edu
Website: jennk.com

Link to folder with all the resources: <https://stsci.box.com/v/sonificationart>

In that folder is also this document with more links: <https://stsci.box.com/s/mau1szqfeh5thgkfpdmqx9bgi8gwfb2y>

### **Presenter 4: Dr Matt Russo**

**Title: Listening to Images With PixelSynth**

Matt Russo is an astrophysicist, musician, and sonification specialist. He frequently produces data sonifications for NASA with his project SYSTEM Sounds.

Contact: matt@astromattrusso.com
Website: [astromattrusso.com](http://astromattrusso.com)

Link to PixelSynth, online sonification tool:

<https://matt-russo.github.io/pixelsynth-sw/>

More sonification by Matt Russo, for NASA:

The full set of image sonifications by the Chandra X-Ray Center, including galaxies, nebulae, and black holes.

Link: <https://chandra.si.edu/sound/>

### Presenter 5: Phia Damsma

**Title: Never too early to learn sonification**

Phia Damsma is Creative Director of Sonokids Australia, which recently launched an app for Early Learning of sonification. She is member of the Sonification World Chat (SWC) and Lead of the SWC Working Group ‘Learn’.

Contact: phia@sonokids.com

Website with info, user survey and links to download the free CosmoBally on Sonoplanet app to explore sonification:
<https://www.sonoplanet.com>

### **Presenter 6: Charlie Roberts**

**Title: Sonification to interpret graph shape using the Desmos graphing calculator.**

Charlie Roberts, Victorian Visiting Teacher Service, Secondary Mathematics Teacher, promoting accessible mathematics through EduVis and administrator of 'Educators supporting students with V.I. in Maths' Facebook group.

Contact Charlie: charlie@eduvis.com.au
Desmos website for the free online Desmos graphing calculator: <https://www.desmos.com>

Desmos accessibility and short demo of ‘audio tracing’: <https://www.desmos.com/accessibility>

### Presenter 7: Bill Jolley

**Title: Sonification on the Apple iPhone.**

Bill Jolley is a mathematician whose interests include new horizons for assistive technology and emerging applications of artificial intelligence. He is Deputy Chair of Vision Australia and a member of the Aged Care Council of Elders which provides community-based advice to the Commonwealth Minister for Health and Aged Care. For eight years he was treasurer of the International Council on English Braille and in 2014 he received the Tammy Axelsen Lifetime Achievement award.

Contact: wjolley@bigpond.com

The Stocks app is installed as a standard on iPhone or iPad. ‘Battery’ is in the device’s Settings. The option ‘Audio graph’ is only available with VoiceOver turned on.