

Victor Shepardson

victor-shepardson.github.io

Researcher
Developer
Musician

Eggertsgata 24 apt 604
102 Reykjavík, Iceland

victor.shepardson@gmail.com | victorshepardson@hi.is

Education

University of Iceland / PhD student, Cultural Studies

September 2021 - present, Reykjavík, Iceland

Practice-based research into new musical instruments and phenomenology of AI in the Intelligent Instruments Lab.

Dartmouth College / MA Digital Musics

September 2014 - June 2016, Hanover, NH, USA

Coursework including computer music composition, animation, psychoacoustics, music information retrieval, data visualization, machine learning and deep neural networks. Live sound and performance in the contemporary music ensemble.

University of Virginia / BA Computer Science

August 2010 - May 2014, Charlottesville, VA, USA

Highest distinction, Phi Beta Kappa. Undergraduate thesis on texture synthesis in computer graphics. Advanced coursework in computer music, computer graphics, and programming languages.

Work

Freelance Creative Software Developer

2014 - Present

- ⇒ Generative MIDI software for magnetic resonator piano in Arca's *The Light Comes in the Name of the Voice*, Bourse de Commerce Paris 2024 and Okayama Art Summit 2025
- ⇒ Software development and model training for *Tungnaá*, a musical instrument with Jonathan Reus, and *Bla Blavatar vs Jaap Blonk*, Prix Ars Electronica 2025 award of distinction
- ⇒ Software, sound design and installation for *Pond Brain*, a work by Jenna Sutela in three editions for Copenhagen Contemporary and Helsinki Biennial 2023, Castello di Rivoli 2025
- ⇒ Speech-synthesis software and installation for *Deviant Chain*, a concert installation with Stefan Maier and Alan Segal at Ultima Festival 2019 Oslo
- ⇒ Max/MSP speech-to-control voltage converter for Max Eilbacher
- ⇒ Generative video software for the Synesthesia music visualizer licensed to platform and individuals
- ⇒ Concert telephony system for Nathan Davis's composition *a Sound uttered, a Silence Crossed* (2014)

Machine Learning Engineer

Ntrepid, 2019 - 2021, Herndon, VA

Research & development of deep neural text-to-speech and vocoding systems. Reproduced and extended state-of-the art generative models using PyTorch.

Teaching Assistant

Dartmouth College, 2015 - 2016

University of Virginia, 2012 - 2014

Grading and office hours for courses in Machine Learning, Sonic Arts, Computer Architecture, Discrete Math, Algorithms, and Computer Graphics. Live sound for numerous musical performances.

Research Intern

Arqball LLC, 2013, Charlottesville, VA

Researched algorithms and in-browser deployment for editing 360° product photography.

Publications

- Shepardson, V.** & Stefánsdóttir, H. & Magnusson, T. 2025. Evolving the Living Looper: Artistic Research, Online Learning, and Tentacle Pendula. In Proc. *International Conference on New Interfaces for Musical Expression*.
- Shepardson, V.** & Magnusson, T. 2025. dit dah delta token: Statistical Models of Music and Language Interfering via Morse Code. In Proc. *International Computer Music Conference*.
- Armitage, J., & **Shepardson, V.**, 2024. Augmenting the Expressivity of the Notochord Generative MIDI Model for Arca's "The Light Comes in the Name of the Voice" Magnetic Resonator Piano Installation. In Proc. *Artificial Intelligence and Music Creativity*.
- Shepardson, V.**, Reus, J. & Magnusson, T., 2024. Tungnaá: a Hyper-realistic Voice Synthesis Instrument for Real-Time Exploration of Extended Vocal Expressions. In Proc. *International Conference on New Interfaces for Musical Expression*.
- Privato, N., **Shepardson, V.**, Lepri, G. & Magnusson, T., 2024. Stacco: Exploring the Embodied Perception of Latent Representations in Neural Synthesis. In Proc. *International Conference on New Interfaces for Musical Expression*.
- Skach, S., **Shepardson, V.** & Magnusson, T., 2024. About TIME: Textile Interfaces for Musical Expression. In *Proceedings of the International Conference on New Interfaces for Musical Expression*.
- Armitage, J., **Shepardson, V.**, Crozzoli, M. & Magnusson, T., 2024. Commingling Artificial Life and Interactive Machine Learning in Diffractive Artistic Research Practice. In Proc. *ALIFE 2024*.
- Armitage, J., Privato, N., **Shepardson, V.**, & Gutierrez, C. B. 2023. Explainable AI in Music Performance: Case Studies from Live Coding and Sound Spatialisation. In *XAI in Action: Past, Present, and Future Applications*.
- Pierce, E., **Shepardson, V.**, Armitage, J., & Magnusson, T. 2023. Bela-IREE: An Approach to Embedded Machine Learning for Real-Time Music Interaction. In Proc. *Artificial Intelligence and Music Creativity*.
- Shepardson, V.** & Magnusson, T. 2023. The Living Looper: Rethinking the Musical Loop as a Machine Action-Perception Loop. In Proc. *International Conference on New Interfaces for Musical Expression*.
- Shepardson, V.**, Armitage, J., & Magnusson, T. 2022. Notochord: a Flexible Probabilistic Model for Embodied MIDI Performance. In Proc. *Artificial Intelligence and Music Creativity*.
- Franzson, D. B., **Shepardson, V.**, & Magnusson, T. 2022. Autocoder: a Variational Autoencoder for Spectral Synthesis. In Proc. *International Computer Music Conference*.
- Armitage, J., Magnusson, T., **Shepardson, V.** & Úlfarsson, H., 2022. The Proto-Langspil: Launching an Icelandic NIME Research Lab with the Help of a Marginalised Instrument. In Proc. *International Conference on New Interfaces for Musical Expression*.
- Shepardson, V.**, 2016. Audiovisual Synthesis with ABSTRACT/CONCRETE. In Proc. *4th International Workshop on Musical Metacreation (MuMe 2016)*

Talks

- Evolving the Living Looper...* @ New Interfaces for Musical Expression ANU Canberra, June 2025
- dit dah delta token* @ International Computer Music Conference Boston, June 2025
- Guest lecture @ CAMPfr Inhuman Listening with Stefan Maier, online, December 2024
- Learning AI With Txalaparta / Aprendiendo IA con Txalaparta* @ Haizebegi Festival Abaola, October 2024
- E-textile No-input Mixer @ Ohio State University, with Sophie Skach Columbus, March 2024
- E-textile No-input Mixer @ Knit Futures, with Sophie Skach Kent State University, March 2024
- Improv with Neural Audio Synthesis, with Schroeder and Reuben @ SARC QU Belfast, November 2023
- The Living Looper...* @ New Interfaces for Musical Expression Centro de Cultura Digital CDMX, June 2023
- AI and the Art World @ Hugarflug Research Festival Iceland University of Arts, Reykjavík, February 2023
- Notochord and Microphenomenology @ Embodied AI Workshop, U Oslo and online, November 2022
- Notochord...* @ AI Music Creativity online, September 2022
- Proto-Langspil @ Ómar Festival Verksmiðjan Hjalteyri, Iceland, July 2022
- No-input Mixing Board and SuperCollider @ Moving Strings Symposium IUA Reykjavík, December 2021
- Sound Seed Automata* @ Hybrid Live Coding Interfaces online, November 2021
- Audiovisual Synthesis with ABSTRACT/CONCRETE* @ ICCM MuMe Workshop UPMC Paris, June 2016

Academics + Open Source

Session Chair, New Interfaces for Musical Expression 2025
Session Chair, International Computer Music Conference 2025
Co-mentor, Google Summer of Code (Python Foundation) 2025
Reviewer, International Computer Music Conference 2025
Reviewer, New Interfaces for Musical Expression 2025
Reviewer, Routledge book proposal, 2024
Session Chair, Artificial Intelligence and Music Creativity 2024
Reviewer, Tangible and Embodied Interfaces 2024
Reviewer, New Interfaces for Musical Expression 2024
Reviewer, Transactions on Computer-Human Interaction, 2023
Area Chair, Artificial Intelligence and Music Creativity 2023
MS Thesis External, Karl Jóhannsson, University of Reykjavík Computer Science, 2023
Co-mentor, Google Summer of Code (BeagleBoard) 2022
Workshop Organizer, New Interfaces for Musical Expression 2022
MS Thesis External, Kim Cosmo Ström, University of Iceland Computer Science, 2022
Reviewer, Nordic Sound and Music Computing 2021

Concerts + Installations

IIL x Spirits in Complexity @ 12 Tónar, Reykjavík 2025. No-input mixer, non-sense DSP, notochord
Pikknikk @ The Nordic House, Reykjavík 2025. No-input mixer, non-sense DSP, playing with the birds
S27, Hafnarhaus, Reykjavík 2025. No-input mixer, non-sense DSP, no-one playing along
OFUR-ORGEL í Fríkirkjan, Reykjavík 2025. *Haunting* for Notochord and church organ, with Julie Zhu
ErkiTið Festival, Reykjavík 2024. *dit dah delta token* for live coded language models
Morse Code @ Lofskeytastöðin, Reykjavík 2024. *dit dah delta token* for live coded language models
Snjallfiðlutónleikar @ Mengi, Reykjavík 2024. Computer and archives with Halla Steinunn Stefánsdóttir
NIME 2024, Utrecht. *Learning Machine Knit Minput Intertextiles* with Sophie Skach
IIL Diffractional Sonic Dialogues @ Mengi, Reykjavík 2024. Tabletop guitar and Living Looper
Basque-Icelandic Symposium, Djúpavík 2024. Analog electronics, metal trash, herring oil cistern
Auto Eater Aether Theater @ R6013, Reykjavík 2024. No-input mixers and software with Gianluca Elia
ErkiTið Festival, Reykjavík 2023. Living Looper with Intelligent Instruments Ensemble
Textile Intersections, Loughborough University, London 2023. No-input textiles with Sophie Skach
Notochord Arcs & Scrambled Signals @ AIMC 2023, University of Sussex. With Nicola Privato
Notochord Arcs & Scrambled Signals @ Mengi, Reykjavík 2023. With Nicola Privato
Ómar Festival @ Verksmiðjan Hjalteyri 2023. Living Looper and guitar with Thor Magnusson
Organic Intelligence @ Hallgrímskirkja, 2023. *Associative Memories* for MIDI church organ and archives
Living Art Museum, Reykjavík 2023. Sonic batons with Majella Clarke and Nicola Privato
Living Loops @ Mengi, Reykjavík 2022. Improvisation with guitarists and Living Looper
Vic & Bob @ Mengi, Reykjavík 2022. Laptop, no-input mixer and modular duo with Bob Hermit
INNI showcase @ Iceland Airwaves, Reykjavík 2022. Jam with Intelligent Instruments Lab members
Ómar Festival @ Verksmiðjan Hjalteyri 2022. Proto-langspil group improvisation
Sonic Fluidities, UCSD (remotely) 2018. Video projection for Clara Latham/New Pope keynote
Out of the Blue Too Gallery, Cambridge MA 2016. Video projection with New Pope and Rangda
DAX 2016, Dartmouth College, *Halting Problem* for Turing machines, TVs and speakers
ICMC 2015, Denton TX, *Studies In Being Alive I-III* for fixed media
Twisted Branch Tea Bazaar, Charlottesville VA 2014. Laptop and guitar improvisation