

My research has a focus on **Explainable AI**, **Generative Modelling**, and **Human-Computer Interaction**. In particular, developing **inclusive and accessible** tools and materials that facilitate media creations.

EDUCATION

Queen Mary University of London

PhD in Artificial Intelligence and Music Technology

London, UK

Sep. 2023 - Present

Topic: Explainability of Neural Audio Synthesis, Supervisor: Dr. Anna Xambó Sedó and Prof. Nick Bryan-Kinns

University of the Arts London - Creative Computing Institute

MSc Computing and Creative Industry (Distinction)

London, UK

Sep. 2021 - Dec. 2022

University of Liverpool

BSc (Hons) Computer Science (First Class)

Liverpool, UK

Sep. 2018 - July. 2021

EXPERIENCE

UAL Creative Computing Institute

Module Leader

London, UK

Jan. 2023 - Jan. 2026

- Module: (2024/25, 25/26) [BSc (Hons) level-4] *Mathematics and Statistics for Data Science* - Duties: preparation, delivery, assessment.

Associate Lecturer

- Module: (2022/23, 23/24, 24/25, 25/26) [MSc level-7] *Exploring Machine Intelligence* - Duties: preparation, delivery, assessment.
- Short course: (2022, 2023) [MA/MSc level-7] *C++ Programming* (a three-week short course) - Duties: preparation, delivery.

Guest Lecturer

- Module: (2024/25) [MSc level-7] *Artificial Intelligence and Machine Learning* - Duties: preparation and delivery.
- Module: (2024/25) [BSc (Hons) level-4] *Digital Systems* - Duties: preparation and delivery.
- Module: (2022/23) [MSc level-7] *Critical Studies: Computational Thinking* - Duties: preparation and delivery.

Research Fellowship - Xi'an Jiaotong-Liverpool University

Research Assistant

Suzhou, China

May. 2018 - Jan. 2019

Duties: Conducting *user-centred research* in wearable technology and e-textiles, developing prototypes.

JOURNAL / BOOK PUBLICATION

- [Book Chapter, just accepted] **S.J. Zheng**, A. Xambó Sedó, N. Bryan-Kinn, *Explainable AI through the Lens of Material Agency: Enabling Musical Interface Design with Neural Audio Models*. Springer Series on Cultural Computing, Upcoming, 2026.
- **S.J. Zheng**, A. Xambó Sedó, N. Bryan-Kinn, *Gestural Affordances in AI Audio Latent Space*. *Frontiers in Computer Science*, Sep. 2025. [pdf]

CONFERENCE PROCEEDINGS

- **S.J. Zheng**, K. Yoshida, N. Garcia-Peguinho, J. Liu, D. Hearn, A. Xambó Sedó, N. Bryan-Kinn, *Latent Terrain: Adapting Neural Audio Auto-encoders as Design Materials in NIME*, International Conference on New Interfaces for Musical Expression (NIME '26). UK, Jun. 2026. [pdf]
- N. Bryan-Kinns, **S. Zheng**, F. Castro, M. Lewis, JR. Chang, G. Vigiensoni, T. Broad, M. Clemens, E. Wilson, *XAIxArts Manifesto: Explainable AI for the Arts*. In EA of the CHI Conference on Human Factors in Computing Systems (CHI EA '25). Japan, Apr. 2025. [pdf]
- C. Saitis, BM. Del Sette, J. Shier, H. Tian, **S. Zheng**, S. Skach, CN. Reed, C. Ford, *Timbre Tools: Ethnographic Perspectives on Timbre and Sonic Cultures in Hackathon Designs*. In Proceedings of the 19th ACM International Audio Mostly Conference (AM), Italy, Sep. 2024. [pdf]
- **S. Zheng**, BM. Del Sette, C. Saitis, A. Xambó, N. Bryan-Kinns, *Building sketch-to-sound mapping with unsupervised feature extraction and interactive machine learning*. International Conference on New Interfaces for Musical Expression (NIME '24), Netherlands, Sep. 2024. [pdf]

SELECTED TALKS / EXHIBITIONS / PRESS

- CDM Create Digital Music [news letter](#) (Press). Jun. 2026, **Berlin, Germany**
- Goldsmiths University of London, CSTC, [AI and Music Seminar](#) (Talk). Feb. 2026, **London, UK**
- Sónar+D 2025, [Project Area](#) (Exhibition). Jun. 2025, **Barcelona, Spain**
- [IRCAM Forum Workshops](#), Centre Pompidou, 2025 (Talk). Mar. 2025, **Paris, France**
- Queen Mary Music Festival 2025 (Performance). Mar. 2025, **London, UK**

ORGANISED CONFERENCES / WORKSHOPS

- **Co-Chair**, The 4th International Workshop on Explainable AI for the Arts (XAIxArts 2026) Jun. 2026, **London, UK**
- **Publicity Chair**, The 18th ACM Conference on Creativity & Cognition (C&C '26) Jun. 2026, **London, UK**
- **Coordinator**, 2025 AES International Conference on AI and ML for Audio Sep. 2025, **London, UK**
- **Undergraduate Research Chair**, The 17th ACM Conference on Creativity & Cognition (C&C '25) Jun. 2025, **Online**

- **Facilitator**, Responsible AI and Music Workshop [EP/Y009800/1] at UAL Creative Computing Institute Jul. 2024, **London, UK**
- **Organising Committee**, The 2nd International Workshop on Explainable AI for the Arts at C&C '24 Jun. 2024, **Chicago, IL, USA**
- **Staff Member**, The 1st AHRC Sensing the Forest Summer School [AH/X011585/1] Jun. 2024, **Surrey, UK**
- **Organising Team**, Workshop on Marginalized Music Genres and AI Music Generation at Central Conservatory of Music, China Feb. 2024, **Beijing, China**
- **Technical Program Committee**, International Conference on Algorithm, Image Processing and Machine Vision (AIPMV '23) Sep. 2023, **Qingdao, China**

DEMOS / WORKSHOP PAPERS

- J. Liu, **S.J. Zheng**. *Exploring AI Audio Models in Soundwalking with Broader Audiences*. In Proceedings of the ACM Creativity and Cognition (C&C) Conference 2026, London, UK, Jul. 2026. [pdf]
- H. Tian, **S. Zheng**, S. Lattner, M. Lagrange, C. Saitis, *Agentic Max/MSP Programming with LLMs and MCP*. In Extended Abstracts for the Late-Breaking Demo Session of the 26th Int. Society for Music Information Retrieval Conf (ISMIR)., Daejeon, South Korea, 2025 [pdf].
- C. Saitis, BM. Del Sette, J. Shier, H. Tian, **S. Zheng**, S. Skach, CN. Reed, C. Ford, *Ethnographic Exploration of Timbre in Hackathon Designs*. CHIME Annual Music and HCI Conference 2024. Milton Keynes, UK, Dec. 2024
- N. Bryan-Kinns, C. Ford, **S. Zheng**, H. Kennedy, A. Chamberlain, M. Lewis, D. Hemment, Z. Li, Q. Wu, L. Xiao, G. Xia, J. Rezwana, M. Clemens, and G. Vigiensoni. *Explainable AI for the Arts 2 - XAIxArts2*. In Proceedings of the 16th ACM Conference on Creativity and Cognition (C&C) Chicago, IL, USA, Jun. 2024. [pdf]
- **S. Zheng**, A. Xambó, N. Bryan-Kinns, *A mapping strategy for interacting with latent audio synthesis using artistic materials*. In Proceedings of Explainable AI for the Arts Workshop 2024 (XAIxArts 2024). Chicago, IL, USA, Jun. 2024 [pdf]
- **S. Zheng**, M. Grierson, (2023) *StyleGAN-Canvas: Augmenting StyleGAN3 for real-time human-AI co-creation*. In Joint Proceedings of the ACM Intelligent User Interfaces Workshop (IUI), Sydney, Australia, Mar. 2023. [pdf]

EDITORSHIPS

- N. Bryan-Kinns, C. Ford, **S. Zheng**, et al. (Eds.) (2024). Proceedings of The second international workshop on eXplainable AI for the Arts (XAIxArts). arXiv:2406.14485. [online]

REVIEWING

- [2026] (Reviewer) The International Society for Music Information Retrieval Conference (ISMIR).
- [2026] (Reviewer) ACM Creativity and Cognition Conference (C&C).
- [2026] (Reviewer) The International Conference on New Interfaces for Musical Expression (NIME).
- [2024, 2025, 2026] (PC member) International Workshop on Explainable AI for the Arts.
- [2025] (PC member) AES International Conference on AI and ML for Audio.
- [2025] (Guest reviewer) International Journal of Performance Arts and Digital Media.

MEMBERSHIPS / CERTIFICATES

- Fellowship of the Higher Education Academy (FHEA), UK - Ref: PR316557 [Jun. 2026].
- Associate Fellowship of the Higher Education Academy (AFHEA), UK - Ref: PR316557 [Apr. 2025].

SUPERVISION (AS PRIMARY SUPERVISOR)

- **MSc Research Supervisor**, Postgraduate thesis supervision: 16 in total (6 in 2022/23; 4 in 2023/24; 6 in 2024/25)
- **MA Project Supervisor**, Postgraduate thesis supervision: 1 in total (1 in 2023/24)

FUNDING / SCHOLARSHIPS

- PhD studentship from the UKRI Centre for Doctoral Training in Artificial Intelligence and Music [EP/S022694/1], 2023 - 2028.

AWARDS

- **World Finalists - RESHAPE 18 | SENSING MATERIALITIES** **Barcelona, Spain**
Entered the top 10 world finalists of [RESHAPE 18 product design category](#). Oct. 2018
- **IT Category Winner - Summer Undergraduate Research Fellowship (SURF) programme** **Suzhou, China**
Awarded the 1st prize in the information technology category with a research project on smart textiles. Aug. 2018

THESIS

- **Real-time Interface for Human-AI Interaction - Masters Thesis** **London, UK**
Developed a high performance framework for real-time image generative AI, aims to facilitate the human-AI image co-creative applications. Supervised by Prof. Mick Grierson. May - Dec. 2022
- **Sending and Receiving Data using Audible Sound - Undergraduate Thesis** **Liverpool, UK**
Developed a data-over-sound protocol for low power IoT systems using techniques in digital signal processing. Supervised by Dr. Thomas Carroll. Oct. 2020 - May. 2021

SKILLS

Frameworks

PyTorch (6 years' experience, 3 years' teaching experience)

LibTorch (2 years' experience)

JAX (1 years' experience)

Web Development (5 year's experience, [web portfolio](#)) - Django, Flask, Socket.IO, WebSocket.

3D Maths/Geometry Game Engines - Unity, p5.js, three.js

Languages

Python (6 years' experience) - statistics, machine learning, deep learning for audio

C++ (4 years' experience, 2 years' teaching experience) - digital signal processing

Front-End Development (7 years' experience) - Javascript, Vue.js

iOS Development - Swift and Objective-C - [portfolio >>](#)

Linux command line

Sound&Music

DAWs - Ableton Live, Logic Pro

Audio Programming (3 years' experience) - MaxMSP

Sound Engineering (5 years' amateur-level experience) - studio recording, sound design and synthesis

Music Composition and Production - [SoundCloud portfolio >>](#)

Other Creative Tools

Microcontrollers for Physical Computing - Arduino, ESP32

Cinema 4D & Octane Render - (portfolio on request)

Adobe Creative Suite - graphic design (portfolio on request)

Photography (self-taught) - camera skills (still and moving), lighting, and digital post-production (portfolio on request)