HUW WILLIAM CHESTON

Email | Webpage | GitHub | Portfolio | Google Scholar | @HuwCheston

EDUCATION

Ph.D., Music, Centre for Music & Science, University of Cambridge   *expected* October, 2024
   Thesis: New Methods in Quantitative Analysis and Modeling of Musical Improvisation
   Supervisor: Peter Harrison & Ian Cross

MSt., Music, Linacre College, University of Oxford (*Distinction*)   October, 2020
   Final average of 85%, *graduated with the highest mark in the year*

BA., Music, Christ Church, University of Oxford (*First Class*)   June, 2019
   Final average of 76%, *graduated with the highest mark in the year*

SELECTED PUBLICATIONS

Cheston, H., Cross, I., & Harrison, P. M. C. (2024, in press). Trade-offs in Coordination Strategies for Duet Jazz Performances Subject to Network Delay and Jitter. *Music Perception.*
   TOPICS: linear modelling, computer simulations, experiment software design, massive online experiments

Cheston, H., Schlichting, J. S., Cross, I., & Harrison, P. M. C. (2024). Rhythmic Qualities of Jazz Improvisation Predict Performer Identity and Style in Source-Separated Audio Recordings. *PsyArXiv.* [DOI: 10.31234/osf.io/txy2f]
   TOPICS: machine learning, audio signal processing, music information retrieval, music classification

Cheston, H., Schlichting, J. S., Cross, I., & Harrison, P. M. C. (2024). Cambridge Jazz Trio Database: Automated Timing Annotation of Jazz Piano Trio Recordings Processed Using Audio Source Separation. *PsyArXiv.* [DOI: 10.31234/osf.io/jyqp3]
   TOPICS: audio signal processing, music information retrieval, dataset, data pipeline

SELECTED AWARDS AND PRIZES

Project Incubation Award (*£2000*), Cambridge Digital Humanities   May, 2022
Awarded for development and testing of *Audio-Visual Manipulator* software [Project page]

Vice-Chancellor's Award (*£75,000*), Cambridge Trust   September, 2021
Full scholarship (fees & stipend) for Ph.D study

Musicology Prize (*£100*), Faculty of Music, University of Oxford   October, 2020
Awarded for highest average mark in 2020 MSt. cohort

Louis Curran Scholarship (*£25,000*), Linacre College, University of Oxford   August, 2019
Full scholarship (fees & stipend) for MSt. study

Gibbs Prize in Music (*£500*), Faculty of Music, University of Oxford   June, 2019
Awarded for highest average mark in 2019 BA. cohort

Academic Scholarship (£ *300* x2), Christ Church, University of Oxford   2017; 2018

TEACHING

Music & Science Module Leader, Cambridge Summer School, Sutton Trust   August 2023
Delivered workshop on audio signal analysis for summer school participants (A-Level equivalent)

Supervisor & Guest Lecturer , Faculty of Music, University of Cambridge   January 2022 –

- Delivered small-group supervisions for Undergraduate students on: (*i*) analysing audio recordings, (*ii*) introduction to programming in Python and R, (*iii*) visualising and simulating data.
- Delivered yearly lecture on analysing audio recordings for Undergraduate *Music & Science* course, involving introduction and demonstration of Music Information Retrieval concepts.
- Co-supervised final-year Undergraduate dissertation project, involving automated harmonic analysis of jazz piano recordings in Cambridge Jazz Trio Database (*see above*).
- Supervised first-year Undergraduate extended essay projects on jazz history and theory.

Graduate Music Assistant, Kingswood School, Bath, UK   September 2020 – June 2021
Duties involved: (*i*) teaching music theory & composition classes; (*ii*) managing school's recording studio; (*iii*) delivering extra-curricular music performance and audio production classes.

EXPERIENCE

Professional Musician & Sound Technician [Showreel link]   September 2016 –

Administrator, WallpaperJazz [Website link]   June 2016 –
Online blog hosting transcriptions of jazz improvisations, averaging 1000+ monthly views.

TECHNICAL SKILLS

Programming

- Python 🐍 (NumPy, Pandas, Matplotlib, Plotly, Scikit-learn, SciPy, Statsmodels, Librosa)
- R (ggplot2, lme4, tidyverse)
- **git**, LaTeX, Jupyter, PyCharm, RStudio, Docker, HTML, CSS, JavaScript (JQuery, Plotly)

Statistics

- Generating and working with large audio data sets
- Machine learning pipelines (data cleaning, feature extraction, optimisation)
- Time series analysis and modelling
- Data visualisation, including interactive plots and animations [Example 1] [Example 2]
- Completed all *Basic Statistics Stream* and *Time Series Analysis* modules taught by Cambridge Social Sciences Research Methods Programme and passed all end-of-module exams

REFERENCES AVAILABLE ON REQUEST