Corey Ford

BSc(Hons) MRes UWE, AFHEA
PhD Researcher in AI / HCI /Music

Linked-in: linkedin.com/in/coreyford
Github: github.com/thecoreyford
Email: fordc004@gmail.com

Education

2020-present	**Queen Mary University of London** PhD in Artificial Intelligence and Music (HCI)
2019-2020	**The University of The West of England** MRes Data Science (HCI), Distinction
2016-2019	**The University of the West of England** BSc (Hons) Creative Music Technology (JAMES accredited), First class
2009-2016	**Cox Green Secondary School** A-Level Mathematics, Music and Media – Grade B
2005-2014	**FunTech Computing School** A-Level Computing (Aged 15) and GCSE ICT (Aged 12) – Grade A

Employment

2020-present **Demonstrator** (Queen Mary University of London)

Contributed to teaching, assessment (*), and lecturing (%) across the university's computer science and creative engineering degrees, on the following modules:

- Design for Human Interaction*% (Level 6 and 7)
- Interaction Design* (Level 6)
- Creative Group Project* (Level 5)
- Arts Application Programming (Level 4)

Summer 2021 **Research Assistant (Explainable AI)** (Queen Mary University of London)

Worked in a team to undertake a survey of AI systems which support co-creation of music between humans and machines, reviewing a number of creative AI systems from a user-centred perspective and developing a taxonomy based on how people interact with them.

2019-2021 **Associate Lecturer** (The University of The West of England)

Contributed to lecturing, teaching, assessment (*= and curriculum design) for the BSc (Hons) Music Technology degrees and MSc Data Science programme, on the following modules:

- Data Science* (Level 7)
- Audio Technology* (Level 4)
- Introductory Audio Programming (Level 4)
- Audio Process Design and Implementation (Level 5)

2018-2020 **Programming Tutor (Espresso)** (The University of The West of England)

Lead drop-in sessions for anyone with programming questions across the university's computer science courses and their varied modules (such as: Intro to C++; Audio Process Design and Implementation; and Data Structures and Algorithms).

Summer 2019 **Research Assistant (Manhattan)** (The University of The West of England)

Supported an iterative design process where functionality, language primitives and improved usability were developed based on my experience of transcribing music as {music + code} with a novel generative music programming environment, named Manhattan.

Jun-July 2019 **Workshop Lead** (The University of The West of England)

Developed didactic materials and led a workshop for A-Level students, introducing them to sound editing. This was for a STEM outreach event (funded by the Institute of Coding).

Summer 2018	**Audio Software Developer Intern** (The University of The West of England) Worked with UWE's Creative Technologies Laboratory, supporting experimental work with their audio development board, writing real-time C++ and FAUST code.
2017-2018	**Academic PAL Leader** (The University of The West of England) Academic mentor/facilitator for 1st year students in Music Technology (particularly helping with the Introductory Audio Programming module). Led to an ILM Level 3 Mentoring Award.
2017-2018	**Tech Tutor** (FunTech) Tutoring holiday tech camps for 8-16-year-olds. These included: Lego EV3's, Java, Python, App Design, OOP & Scratch.
Mar-Apr 2017	**Developer** (FunTech) I wrote the course content in C for a "Music Coder" tech camp. I'd pitched the idea with a mini business plan and budget estimation.
2015-2016	**Network Systems Assistant** (Wessex Primary School) I worked as a technician fixing general IT issues around the school. This included: re-imaging laptops, debugging, researching software, running updates and communicating efficiently through e-mail.

Publications

::: FULL CONFERENCE PAPERS :::

Ford, C and Bryan-Kinns, N (2022) Identifying Engagement in Children's Interaction whilst Composing Digital Music at Home. *ACM Conference on Creativity and Cognition.* Venice, Italy. [in-person]

Ford C, Bryan-Kinns, N and Nash, C (2021) Creativity in Children's Digital Music Composition. *International Conference on New Interfaces for Musical Expression (NIME).* NYU Shanghai, China [online].

Ford, C and Nash, C (2020). An Iterative Design 'by proxy' Method for Developing Educational Music Interfaces. *International Conference on New Interfaces for Musical Expression (NIME).* Birmingham, UK [online].

::: WORKSHOPS :::

Ford, C and Bryan-Kinns, N (2022) Speculating on Reflection and People's Music Co-Creation with AI. *Workshop on Generative AI and HCI at CHI.* New Orleans, USA [online].

Bryan-Kinns, N, Banar, B, **Ford, C**, Reed, CN, Zhang, Y, Colton, S and Armitage, J (2021) Exploring XAI for the Arts: Explaining Latent Space in Generative Music. *1st Workshop on eXplainable AI Approaches for Debugging and Diagnosis at NeurIPS*. New Orleans, USA [online].

Memberships

Associate Fellow of Higher Education Academy (AFHEA)

Student Member of the Association of Computing Machinery (ACM) & SIGCHI

Member of the Interaction Design Foundation 2021-2022

Technical Skills

UX Research	**Skills** – Empirical studies, personas, usability testing, user stories, wizard-of-oz, ideation, design fiction, prototyping & wireframing, child-computer interaction **Knowledge** – Designing for engagement, designing for reflection, creativity support tools, human-ai interaction, Norman's design principles, ethnography, phenomenology, multimodal interface design, activity theory, distributed cognition, casual creators **Quantitative Methods** – experiment design and analysis; A/B testing; questionnaire development and validation; exploratory factor analysis; interaction log mining **Qualitative Methods** – data gathering and analysis of experiential sources (i.e. think-aloud studies, interviews, video-cued recall or thematic analysis)
Languages	**C++** (5 years' practical experience); **Python** (data mining, statistics, ML); **JavaScript** (audio, GUI, ML for web); **LaTeX** (publications); **R; Java; Max MSP; FAUST; HTML; CSS C#**

Frameworks	**JUCE** (experienced in large-scale multi-threaded applications); **Anaconda** (numpy, pandas, matplotlib); **Processing & P5js** (musical interfaces, generative art, web ML); **Music Informatics** (music21, librosa, essensia); **Machine Learning** (TensorFlow, Keras)
Tools	**GIT; MIDI; BibTex; Doxygen; UML; JSON; XML**
Music	**Sibelius** – 7+ years' experience, able to produce complex typeset scores. **DAW's –** (in order of preference) **Logic**, **Pro Tools**, **Cubase** & **Reaper**. **Guitar** (grade 8 standard)**; Piano** (self-taught)**; Composition** (portfolio on request).
Other	**Arduino; OS (**Mac OSX, Windows, Linux); **Applications** (Xcode, Visual Studio, Adobe Creative Suite, MS Office); **Mentoring** (ILM Level 3 Award); **Driving** (British driving license).

Extra Curricula Activity

:::ORGANISATION:::

Senior (2024) and Junior Student Volunteer Co-Chair (2023) for the ACM Creativity and Cognition Conference
Programme chair & editor for the DMRN+16: Digital Music Research Network One-Day Workshop (2021)
Organiser for a group lab event between the IRCAM ACIDS lab (France) and the AI + Music CDT (UK) (2021)

::: WORKSHOPS :::

Workshop support for BBC Digital Cities Event with Manhattan at the Engine Shed, Bristol (2020)
Workshop support for "Crowd Driven Music with Manhattan" at the NIME Conference (2020)

::: OTHER :::

Supported supervision of 2 MSc Computing and Information Systems (Conversion) dissertation projects (2021)
Student Representative for the AI + Music CDT (QMUL, 2020) and MRes Data Science Degree (UWE, 2019)
Volunteer at the International Workshop on Haptic & Audio Interaction Design (HAID) 2022

Reviewing

International Workshop on Haptic & Audio Interaction Design (HAID) 2022
ACM Creativity and Cognition Conference 2022
New Instruments for Musical Expression (NIME) Conference 2021, 2022
Digital Music Research Network One-Day Workshop 2021

Talks

:::INVITED:::

Pint of Science Festival on ART-ifical Intelligence and Music (2022)
On Creativity & Codetta for the School of Computing and Communications at the Open University (2021)
Codetta Talk & Workshop for MA Creative Music Practice students at the University of Gloucestershire (2020)

:::OTHER:::

AIM CDT External Advisory Board 2021
Numerous AIM CDT Forum Events
Group lab event between ACIDS (IRCAM) and AIM (QMUL)
Group lab event between McGill and QMUL
Presentation at the Innovation In Music Conference 2019

Awards and Funding

Pendlebury-Tucker Prize (Award for Best Music Technology Project) (£200)
Dean's Award for Academic Excellence 2016/2017 and 2017/2018
Granted funding from the University of the West of England's enterprise summer scholarship scheme (£1000)

References

Prof Nick Bryan-Kinns (Professor of Interaction Design) – n.bryan-kinns@qmul.ac.uk
Dr Chris Nash (Senior Lecturer in Music Technology) – chris.nash@uwe.ac.uk