

## Programme

Location: Arts 2 Theatre – QMUL Mile end campus  
Zoom: <https://qmul-ac-uk.zoom.us/j/89668766939>

10:00	<b>Welcome – Andrew McPherson</b>
10:10	<b>KEYNOTE</b> "On generative modelling and iterative refinement", <b>Sander Dieleman- (Research Scientist at DeepMind)</b>
11:10	<i>Break (Coffee break)</i>
11:30	"Improving Chord Sequence Graphs with Transcription Resiliency and a Chord Similarity Metric", <b>Jeff Miller, Vincenzo Nicosia and Mark Sandler (Queen Mary University of London, UK)</b>
11:45	"Bringing the concert hall into the living room: digital scholarship of small-scale arrangements of large-scale musical works", <b>David Lewis and Kevin R. Page (University of Oxford e-Research Centre, UK)</b>
12:00	"Leveraging Music Domain Knowledge in Symbolic Music Modeling", <b>Zixun Guo and Dorien Herremans (ISTD, Singapore University of Technology and Design, Singapore)</b>
12:15	"Large-Scale Pretrained Model for Self-Supervised Music Audio Representation Learning", <b>Yizhi Li (University of Sheffield, UK), Ruibin Yuan (Beijing Academy of Artificial Intelligence, China, and Carnegie Mellon University, PA, USA) , Ge Zhang (Beijing Academy of Artificial Intelligence, China and University of Michigan Ann Arbor, USA) , Yinghao Ma (Queen Mary University of London, UK), Chenghua Lin (University of Sheffield, UK) , Xingran Chen (University of Michigan Ann Arbor, USA), Anton Ragni (University of Sheffield, UK), Hanzhi Yin (Carnegie Mellon University, PA, USA), Zhijie Hu (HSBC Business School, Peking University, China), Haoyu He (University of Tübingen &amp; MPI-IS, Germany), Emmanouil Benetos (Queen Mary University of London, UK), Norbert Gyenge (University of Sheffield, UK), Ruibo Liu (Dartmouth College, NH, USA) and Jie Fu (Beijing Academy of Artificial Intelligence, China)</b>
12:30	Announcements
12:45	<i>Lunch - Poster Session</i>

12:45	<i>Lunch - Poster Session</i>
14:15	“Time-Frequency Scattering in Kymatio”, <b>Cyrus Vahidi (Queen Mary University of London), Vincent Lostanlen, Han Han, Changhong Wang (Queen Mary University of London) and György Fazekas (Queen Mary University of London)</b>
14:30	“Working for the AI Man: Algorithmic Rents, Accumulation by Dispossession and Alien Power”, <b>Hussein Boon (University of Westminster, UK)</b>
14:45	“Remarks on a Cultural Investigation of Abstract Percussion Instruments”, <b>Lewis Wolstanholme and Andrew McPherson (Queen Mary University of London, UK)</b>
15:00	“Beat Byte Bot: a bot-based system architecture for audio cataloguing and proliferation with neural networks and Linked Data”, <b>J. M. Gil Panal (E.T.S.I. Informática, University of Málaga, Spain and Luís Arandas (INESC-TEC, University of Porto, Portugal)</b>
15:15	<i>Break</i>
15:30	“Symmetries and Minima in Differentiable Sinusoidal Models”, <b>Ben Hayes, Charalampos Saitis, György Fazekas (Queen Mary University of London)</b>
15:45	“Affordances of Generative Models of Raw Audio to Instrumental Practice and Improvisation”, <b>Mark Hanslip (School of Arts and Creative Technologies, University of York)</b>
16:00	“Practical Text-Conditioned Music Sample Generation”, <b>Scott H. Hawley (Belmont University, USA and Harmonai), Zach Evans, C.J. Carr (Harmonai), and Flavio Schneider (Harmonai).</b>
16:15	Close - Simon Dixon

\* - There will be an opportunity to continue discussions after the Workshop in a nearby Pub/Restaurant for those in London.

## Keynote Talk

### Sander Dieleman - Research Scientist at DeepMind

Title: **On generative modelling and iterative refinement**

#### Abstract:

The field of generative modelling has seen a significant upheaval in the past few years. In the audiovisual domain, adversarial approaches have been all but replaced by diffusion models, resulting in a step change in quality improvements and even mainstream adoption. In this talk, I will argue that iterative refinement is the key to generative modelling at scale, discuss some other innovations behind recent quality improvements, and consider the implications for audio and music generation.

#### Bio:

Sander Dieleman is a Research Scientist at DeepMind in London, UK, where he has worked on the development of AlphaGo and WaveNet. He obtained his PhD from Ghent University in 2016, where he conducted research on feature learning and deep learning techniques for learning hierarchical representations of musical audio signals. His current research interests include representation learning and generative modelling of perceptual signals such as speech, music and visual data.

## Announcements

1. **AIM CDT 2023-2024 call open:** <https://www.aim.qmul.ac.uk/apply/>  
Based at the Centre for Digital Music at QMUL the AIM CDT offers 12+ Fully-funded PhD studentships to start September 2023. The call is open to UK Home and International student and covers fees and a stipend for four years. The application deadline is 31 January 2023
2. **COMPEL-** the Computer Music Preservation Electronic Library! <http://compel-dev.vtlibraries.net/>  
COMPEL is an electronic music database project from Virginia Tech. They collect data about people (composers, performers, and other contributors); compositions; specific performances; and instruments. The database is intended to serve performers, composers and researchers into the field of computer music

## Posters

1	“Which car is moving? A listening approach using distributed acoustic sensor systems”, <b>Chia-Yen Chiang and Mona Jaber (Queen Mary University of London)</b>
2	" YourMT3: a toolkit for training multi-task and multi-track music transcription model for everyone”, <b>Sungkyun Chang, Simon Dixon and Emmanouil Benetos (Queen Mary University of London)</b>
3	“Supervised Contrastive Learning for Musical Onset Detection”, <b>James Bolt and György Fazekas (Queen Mary University of London)</b>
4	“Computational Modelling of Expectancy-Based Music Cognition of Timbre Structures”, <b>Adam Garrow and Marcus Pearce (Queen Mary University of London)</b>
5	“Self-supervised Learning for Music Information Retrieval” <b>Yinghao Ma and Emmanouil Benetos (Queen Mary University of London)</b>
6	"Performance Rendering for Automatic Music Generation Pipelines", <b>Tyler McIntosh and Simon Dixon (Queen Mary University of London)</b>
7	“Explainability in End-User Creative Artificial Intelligence”, <b>Ashley Noel-Hirst and Nick Bryan-Kinns (Queen Mary University of London)</b>
8	" Real-time timbre mapping for synthesized percussive performance", <b>Jordan Shier (Queen Mary University of London), Andrew Robertson (Ableton), Andrew McPherson and Charalampos Saitis (Queen Mary University of London)</b>
9	“Machine Learning of Physical Models for Voice Synthesis”, <b>David Südholt and Joshua Reiss (Queen Mary University of London)</b>
10	"Using Signal-informed Source Separation (SISS) principles to improve instrument separation from legacy recordings ", <b>Louise Thorpe, Emmanouil Benetos and Mark Sandler (Queen Mary University of London)</b>
11	“Personalised music descriptors: valuing user perspective”, <b>Yannis Vasilakis (Queen Mary University of London), Rachel M Bittner (Spotify), Johan Pauwels (Queen Mary University of London)</b>
12	"Learning Music Representations using Coordinated based Neural Network", <b>Ningzhi Wang and Simon Dixon (Queen Mary University of London)</b>
13	“User-Driven Music Generation in Digital Audio Workstations”, <b>Alexander Williams (Queen Mary University of London), Stefan Lattner (Sony SCL) and Mathieu Barthet (Queen Mary University of London)</b>
14	"Conditioning in Variational Diffusion Models for Audio Super-Resolution", <b>Chin-Yun Yu (Queen Mary University of London) Sung-Lin Yeh (University of Edinburgh) György Fazekas (Queen Mary University of London) Hao Tang (University of Edinburgh)</b>