GLAM 3: Biases, taxonomies, and participatory machine learning in music information research

A workshop presented by Research Axis 2: Music Information Research

March 10, 2026, 12:30—17:00

A832 (8 floor), Elizabeth Wirth Music Building, 527 Sherbrooke O

Description

Music and sound collections are not only repositories of recordings and artefacts; they are also information systems. Collections and datasets, controlled vocabularies and taxonomies, algorithms, and search interfaces shape what becomes visible, comparable, and researchable, potentially introducing biases and reinforcing stereotypes. These issues resonate across various fields, including information science, libraries and archives, museums and heritage institutions, music technology and musicology, as well as in artistic and research-creation practices that engage with datasets and collections.

This Research Axis 2 workshop at CIRMMT will explore these themes through a series of presentations followed by a panel discussion. The workshop will feature Prof. Rebecca Fiebrink (UAL), whose work on interactive and human-centred ML has influenced contemporary creative practice. She also participated in the UKRI/AHRC "Transforming Collections: Reimagining Art, Nation and Heritage" project, which applied interactive and participatory machine learning to support new ways of engaging with cultural collections across institutions.

Schedule

12:30 - 13:15 **Light lunch and informal discussions / Repas léger et conversations informelles**

13:15 - 13:20 **Welcome / Mot de bienvenue**

13:20 - 15:20 **Individual talks / Présentations individuelles**

20 minutes each, followed by 10 minutes of discussion

13:20 Rosemary Mountain – *Acknowledging a preference for flexibility and multiple solutions*

13:50 Pouya Mohseni – *Mapping musical information in the Radif through corpus analysis*

14:20 Farzad Daemi Milani – *Expanding the tonal vocabulary of music information systems: 17-TET as a framework for recognizing neutral intervals and microtonal harmony*

14:50 David Piazza – *Materiological biases: strategies for the creative appropriation of implied taxonomies in text-to-audio models*

15:20—15:40 **Coffee break / Pause café**

15:40 - 16:20 **Rebecca Fiebrink – *Interactive ML in the Transforming Collections project***

16:30—17:00 **Round table discussion on biases, taxonomies, and participatory machine learning in music information research**

Presentation abstracts

Rosemary Mountain — *Acknowledging a preference for flexibility and multiple solutions*

I will give an overview of two of my research projects, which are concerned with helping correct biases in music and multimedia analysis and classification. These arose from decades of reflection on how to adapt existing analytical tools and guidelines to be more appropriate for the myriad of musical styles I enjoy, which fared poorly with the standard Western tools I had been taught due to the latter's focus on written scores, equal-tempered pitch-based analysis, cultural assumptions, etc. and compounded by studies in music psychology of the time which seemed to assume a "universal" profile of the receiver, gleaned from feedback from a few subjects in their immediate community.

My proposed solutions prompt reflection and discussions between individuals, to counter these tendencies—but I propose that, as they are designed to highlight such issues, they could be of particular interest to those developing large data-set organization.

One solution is embodied in the installation IMP-NESTAR (on show Mar 3–9 at CIRMMT) and the other is described in my book Conversational Musicology, particularly the appendix A Tool Guide for Music Analysis. I will explain how these connect with the theme of GLAM.

Pouya Mohseni — *Mapping musical information in the Radif through corpus analysis*

The Radif of Iranian music, a canonical repertoire primarily transmitted orally, exists today as a fragmented information system shaped by a century of heterogeneous notation. This study presents a corpus-based analysis of over twenty Radif editions, treating notation as a system of symbolic representation, in which layout, symbols, and auxiliary performance indicators mediate how musical knowledge is conveyed and interpreted, highlighting the challenges of standardization and the variability inherent in orally transmitted repertoires. Instances of semantic ambiguity and cross-edition variation reveal how editorial practices influence the comparability and interpretability of musical content, with implications for digital encoding and computational modelling. By formalizing note-level modifiers and establishing a semantic framework, the paper lays the groundwork for machine-readable representations of the Radif that preserve musical meaning while accommodating diverse editorial traditions. Beyond Iranian music, these findings demonstrate how musical collections and datasets function as knowledge systems and how structured, semantically grounded analysis can support more transparent and interoperable engagement with culturally rooted repertoires.

Farzad Daemi Milani — *Expanding the tonal vocabulary of music information systems: 17-TET as a framework for recognizing neutral intervals and microtonal harmony*

Standard machine learning models for music information retrieval are built on 12-tone equal temperament, a tuning system that has no category for neutral intervals that are intervals that fall between the semitone divisions familiar to Western theory. As a result, a neutral second (e.g., C to D quarter-flat) for instance, or a neutral third (e.g., C to E quarter-flat), both central to Persian and Middle Eastern musical traditions, are either misclassified or simply invisible to these systems. Or, for example, a neutral triad, which is a chord type fundamental to these traditions (e.g., C, D quarter-flat, G) has no place in standard taxonomies. This greatly undermines the system's recognition power, as it cannot accurately capture and analyze a large portion of Middle Eastern music.

This presentation proposes that 17-tone equal temperament (17-TET), which naturally accommodates neutral intervals as stable, named pitch classes, offers a principled way to extend the tonal vocabulary of music information systems. Rather than treating microtonal intervals as deviations from a 12-TET norm, a 17-TET-informed taxonomy would recognize them as first-class musical objects, enabling more accurate melodic and harmonic analysis of Persian, Middle Eastern, and other related microtonal repertoires. This case study raises broader questions about how the choice of tuning system as a foundational assumption in dataset design determines whose music gets correctly represented and whose gets distorted.

David Piazza — *Materiological biases: strategies for the creative appropriation of implied taxonomies in text-to-audio models*

Text-to-audio generative models such as Stable Audio Open are trained on large annotated datasets that encode particular ways of associating meaning to sonic phenomena. These annotations constitute an implicit ontology of sound semantics, determining what the model can produce in response to language and what it struggles to render. Rather than treating these biases as failure modes, this talk examines how they can be exposed and mobilized as compositional material within an electroacoustic practice.

I present two techniques developed through a research-creation project using Stable Audio Open: shallow prompting, which uses minimal and abstract prompts to reveal default sonic associations; and partial denoising, which interrupts generation to produce outputs occupying liminal zones along the model's learned manifold. Each technique treats the model as an opaque system whose biases and regularities are traces of its underlying dataset and annotation practices.

I argue that these techniques constitute a critical engagement with the "commons" embedded within the model: an archive whose biases shape both sonic possibility and interaction modality. The talk includes audio excerpts from a work-in-progress composition, illustrating how bias in deep learning systems can become a site of artistic inquiry.