BRIAN A. MILLER
Curriculum Vitae

EDUCATION

Yale University

Ph.D. Music, Theory concentration	2020

    Dissertation: "Enminded, Embodied, Embedded: The Concept of Musical
        Style from Leonard Meyer to Machine Learning"
    Advisor: Brian Kane

M.Phil. Music Theory	2017
M.A. Music Theory	2016

University of Kansas

M.M. Music Theory	2014

    Thesis: "Exploring Tonal Substitutions in Schubert's Late Sonata Forms"
    Advisor: Scott Murphy

B.S. Computer Engineering	2011

PROFESSIONAL APPOINTMENTS

Lecturer III, Program in Computing for the Arts and Sciences, University of Michigan	2025–present
Lecturer I, Program in Computing for the Arts and Sciences, University of Michigan	2023–2025
General Programmer/Analyst, University of Michigan Institute for Social Research	2021–2023
Lecturer, Department of Music, Yale University	2020–2021

TEACHING

University of Michigan

COMPFOR 111 – Computing's impact on justice: from text to the web	2023–2026
COMPFOR 121 – Computing for creative expression	2023–2026
COMPFOR 325 – Synthesis to Streaming: Music in Digital Culture	2024–2025

Yale University

MUSI 210 & 211 – Studies in Analysis and Composition I & II	2016–2017

    Tonal music theory sequence covering harmony, part-writing, form, model
    composition

MUSI 218 – Elementary Musicianship I	2017

    Aural skills and keyboard lab

MUSI 110 – Introduction to the Elements of Music	2019

    Notation, rhythm, scales, keys, melodies, and chords, including writing, analysis,
    singing, and dictation. Western popular and art music

MUSI 172 – Music in Words: Controversy, Critique, Invective	2020

    Writing seminar examining controversies over questions of musical authenticity
    and identity in popular music, Western art music, and jazz.

As teaching assistant and/or lab instructor:
MUSI 450 – Music and Multimedia   2018
    Introduction to Max/MSP and related technologies
MUSI 100 – Melody, Rhythm, and Notation in Global Context   2020
    Develops skills in singing, hearing, and writing music through repertory-based
    case studies of improvised and written melody in global ritual song traditions

University of Kansas
MEMT 116 | *primary instructor*   2012–2014
    Introduction to music technology, covering production software (iMovie,
    GarageBand), notation software, and basic web design

PEER-REVIEWED PUBLICATIONS

"Rethinking Replication in Leonard Meyer's Theory of Musical Style." In *The Oxford*   2025
Handbook of Music and Corpus Studies. Edited by Daniel Shanahan, Ashley Burgoyne,
and Ian Quinn. NY: Oxford University Press.

"Leonard Meyer's Theory of Musical Style, from Pragmatism to Information   2021
Theory." *Resonance* 2.4, special series on music and cybernetics edited by Eric Drott
and Christopher Haworth.

"'All of the rules of jazz': Stylistic Models and Algorithmic Creativity in Human-   2020
Computer Improvisation." *Music Theory Online* 26.3

OTHER PUBLICATIONS

"Language, Gesture, Style: Adorno's Theory of Musical Reproduction between   2022
Musicology and Art History." In *Dialektik der Schrift. Zu Adornos Theorie der*
musikalischen Reproduktion, Julia Freund, Matteo Nanni, Jakob M. Schermann, and
Nikolaus Urbanek, eds. Wilhelm Fink-Verlag.

"Digital Scores, Algorithmic Agents, Encoded Ontologies: On the objects of   2022
musical computation." In *Material Cultures of Music Notation: New Perspectives on Musical*
Inscription. Floris Schuiling and Emily Payne, eds. Routledge.

REVIEWS

Eitan Wilf, *The Inspiration Machine: Computational Creativity in Poetry and Jazz,*   accepted
(University of Chicago Press, 2023). Reviewed in *Journal of Jazz Studies*

CONFERENCE PRESENTATIONS

"Psychoanalysis and the self in Emmanuel Ghent's early computer music improvisations." American Musicological Society Annual Meeting. Minneapolis, MN
2025

"Synchronization and Surrender in Emmanuel Ghent's Computer Music." Society for American Music Annual Conference. Tacoma, WA
2025

"Old terms, new tensions: Style and genre in music theory and machine learning." Music Theory/Genre Theory conference. Austin, TX
2025

"Improvisation at Bell Labs: Emmanuel Ghent's computer music." Jazz and Improvisation Study Group, American Musicological Society Annual Meeting. Chicago, IL
2024

"Provocations from music on human-AI interaction." Machine as Medium Symposium: Mind and Spirit. Yale Center for Collaborative Arts and Media. New Haven, CT
2023

"Leonard Meyer's Theory of Musical Style, from Pragmatism to Information Theory." Special session on Music and Cybernetics, American Musicological Society Annual Meeting. (online due to COVID-19)
2021

"Open Source Creativity: Google as Computer Music Institution." Society for American Music Annual Conference. (online due to COVID-19)
2021

"The Puzzle of Style: On Leonard Meyer's Unlikely Replications." Society for Music Theory National Conference. Columbus, OH
2019

"From Pragmatism to Information Theory: Leonard Meyer, Musical Style, and the Origins of Corpus Studies." Recursions: Music and Cybernetics in Historical Perspective. Edinburgh, UK
2019

"Language, Gesture, Style: Adorno's Theory of Musical Reproduction between Musicology and Art History." Music, Writing, Difference: An Interdisciplinary Conference on Adorno's Theory of Musical Reproduction. Vienna, Austria
2019

"Jazz, but with Robots: Style and Aesthetics in Human-Computer Improvisation." Society for American Music Annual Conference. New Orleans, LA *(winner of the Mark Tucker Award for outstanding student paper)*
2019

"Algorithmic Agents, Musical Objects, and Mediated Styles: Reframing Computational Music Theory." Society for Music Theory National Conference. San Antonio, TX
2018

"On the Turing Test and the Entailments of Style: Jazz Robots, Metapragmatics, and Improvisation." Midwest Music Research Collective Fall Conference. Lawrence, KS
2018

"Algorithmic Agents, Encoded Ontologies, and Digital Corpora: On the Objects of Computational Music Theory." Material Cultures of Music Notation: An Interdisciplinary Conference. Utrecht, Netherlands	2018
"Meter and Continuity in Stravinsky's *Symphonies of Wind Instruments.*" Buffalo Graduate Music Symposium. Buffalo, NY	2015
"Coding Schenker: Case Studies in Cadence Detection" (poster). Fourth International Conference on Mathematics and Computation in Music. Montreal, QC	2013
"Coding Schenker: Case Studies in Cadence Detection" (paper). Midwestern Music Cognition Symposium. Columbus, OH	2013

INVITED PRESENTATIONS AND WORKSHOPS

"What is Life?" Colloquium, MIT Media Lab, hosted by Octet Collaborative	2026
Guest speaker on unusual career paths, EECS 101. University of Kansas, Lawrence, KS	2024
"Jazz with Robots: AI and Improvisation". Invited expert contribution to *AI for Creative Work* MOOC, U-M Center for Academic Innovation	2024
Teaching Digital Arts Online: Integrating Programming and Graphic Design to Foster Creative Expression. Harmonize Webinar	2024
LSA Faculty Roundtable: GenAI, Ethics, and the Future of Education. University of Michigan, online, April 2024	2024
"Making music with AI: an introduction to tools and platforms". Technology Meets Creativity: A Workshop on AI and Creative Arts. University of Michigan Arts Initiative and MIDAS. Ann Arbor, MI	2024
"Music and AI". Guest presentation for COMPFOR 101 – The Transistor Disruption, Prof. August Evrard, University of Michigan	2023, 2024, 2025
The Future of Musical Knowledge in the Age of Machine Learning, Workshop participant. Center for Interdisciplinary Research, University of Bielefeld, Germany	2023

HONORS, AWARDS, AND GRANTS

Race & Ethnicity Course Development Summer Grant, University of Michigan, LSA DEI Office and LSA Curriculum Committee	2024
5x5 Humanities Collaboratory grant: Music and AI, University of Michigan	2024-2025
LEO Professional Development Fund, University of Michigan (x3)	2023, 24, 25

Finalist, Society for Music Theory Emerging Scholar Award (article) - "'All of the rules of jazz'" in *MTO* 26.3	2021
Yale University Graduate School Alumni Fellow	2020–2021
Society for American Music, Mark Tucker Award for outstanding student paper	2019
Whitney and Betty MacMillan Center for International and Area Studies at Yale Conference Travel Grant (x2)	2019
Yale Graduate School of Arts and Sciences Conference Travel Fellowship (x3)	2018, 2019
Andrew W. Mellon Foundation Summer Writing-in-Residence Dissertation Working Group and professional development grant, Yale University	2018
M.M. Oral Exam passed with distinction, University of Kansas	2014
Rummer Design Award for best undergraduate senior design project in computer engineering, University of Kansas	2011

SERVICE AND PEDAGOGY

Peer reviewer
    Music Theory Online
    Journal of the American Musicological Society

LSA/CRLT Large Course Initiative, faculty learning community	2026
Lecturer I Major Review Committee, U-M LSA	2024
U-M Program in Computing for the Arts and Sciences Curriculum Committee	2024–present
Society for Music Theory Professional Development Committee	*member*	2019–2022
Yale Office of Career Strategy, Graduate Professional Development Program Manager	2021
Fundamentals of Teaching Music workshop, Yale Center for Teaching and Learning	*participant*	2017
Yale Department of Music Professional Development Committee	2016–2017
Yale Department of Music Guest Lecture Committee	2017–2020
Yale Graduate Music Symposium	*Program Committee, Website and program design*	2018
Yale Graduate Music Symposium	*Session Chair and Program Committee*	2016

WORKING GROUPS AND COLLABORATIVE RESEARCH PROJECTS

"The Future of Musical Knowledge in the Age of Machine Learning", preprint.   2025
    https://zenodo.org/records/14537184 | *contributor*

Sound and Technology Working Group, Consortium for the History of Science,   2021–2024
    Technology, and Medicine | *co-convener*

Yale Sound Studies Working Group | *co-convener*   2016–2020

Yale Black Sound and the Archive Working Group | *member*   2017–2019

"Black Sound, Improvisation, and Computer Music."   2018
    An ongoing digital archive for Yale's Black Sound and the Archive Working
    Group. https://blacksound.yale.edu/bsaw-exhibition-start-here/black-sound-
    improvisation-and-computer-music-brian-miller/

The Lost Voices Project | http://digitalduchemin.org   2015
    Coding and data management for similarity network visualizations, comparing
    cadences in a book of 16th-century polyphonic songs.

Duet-on-Pitch: Dual pitch-tracking technology   2010–2014
The University of Kansas Information and Telecommunication Technology Center
    Programming support (Java, Objective C), iPhone app development, musical
    arrangements and encoding. Supervised by Prof. David Petr.

OTHER SKILLS

Languages
- French: reading knowledge and basic proficiency
- German: reading knowledge

Computer programming and data science
    Python (including music21, tensorflow, pandas), Snap!, Stata, C/C++,
        Javascript, Max/MSP, and various other languages.