

Program

Jun 23 - 26, 2026

**Mathematics and Computation in Music 2026
(MCM 2026)**

Bard College, Annandale-on-Hudson, New York, USA

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Tue, June 23

8:50 AM

Arrival, Registration Pickup, or Registration

Break | **Location:** Near Olin Concert Hall in Franklin W. Olin Humanities Building

9:15 AM

Welcome and Opening Remarks

Contribution | **Location:** Olin Concert Hall in Franklin W. Olin Humanities Building | **Speakers:** Mariana Montiel, Charles Doran

9:25 AM

9:30 AM

Voice Leading and Rhythm

Session | **Location:** Olin Concert Hall in Franklin W. Olin Humanities Building

9:30 – 9:55 AM (25m) **The Note at Infinity**

Speaker

Dmitri Tymoczko

10:05 – 10:30 AM (25m)

Parsimonious Voice-Leading in Just Intonation and Hexatonic-like Cycles

Speaker

Matt Klassen

10:35 – 11:00 AM (25m) **Coffee Break, Registration Pickup, or Registration**

11:05 – 11:30 AM (25m) **Counting Rhythms Using Combinatorics on Words**

Speaker

Gonzalo Romero-Garcia

11:40 AM – 12:05 PM (25m) **On Perfectly Balanced Sets: a Computational Investigation**

Speaker

Paul Lascabettes

12:10 PM

12:15 PM

Poster Session

Poster Session | **Location:** Near Olin Concert Hall in Franklin W. Olin Humanities Building

Poster: Tonnetz-Based Mathematical Invariants for the Analysis of Unequal-Tempered Tuning Systems

Speaker

Kateri Doran

Poster: Musical Perspectives

Speaker

Dmitri Tymoczko

12:45 PM

12:50 PM

Lunch Break: On Own at Cafeteria or Restaurants

Break | **Location:** On Own at Cafeteria or Restaurants

1:50 PM

2:00 PM

Applications of Mathematics to Music Theory Analysis of Composers and Styles

Session | **Location:** Olin Concert Hall in Franklin W. Olin Humanities Building

2:00 – 2:25 PM (25m)

On Interval Permutations: Formalization and Analytical Examples

Speaker

Xiao Dai

2:35 – 3:00 PM (25m)

Note Spelling Without Scales in Morton Feldman's String Quartet No. 2

Speaker

Noah Kahrs

3:05 – 3:15 PM (10m) **Break**

3:20 – 3:45 PM (25m)

Persistent Homology on Pointed Chord Spaces

Speaker

Alessandro Casali

3:55 – 4:20 PM (25m)

Modeling End-Weighted and Goal-Directed Conceptions in Gamelan Gong Kebyar

Speaker

Qiuwan Zhao

4:25 PM

4:35 PM

MatheMusical Virtual Museum & Planet Voices by Gilles Baroin

Session | **Location:** New Annandale House (Center for Experimental Humanities)

4:35 – 5:05 PM (30m)

MatheMusical Virtual Museum & Planet Voices by Gilles Baroin

Speaker

Gilles Baroin

5:10 PM

5:10 PM

Dinner Break: On Own at Cafeteria or Restaurants

Break | **Location:** On Own at Cafeteria or Restaurants

6:45 PM

7:00 PM

Keynote Address

Session | **Location:** Olin Concert Hall in Franklin W. Olin Humanities Building

7:00 – 8:00 PM (1h)

Keynote: The Algebra of the 'Tongesellschaft': Towards a Mathematical Conceptualization of Tonal Interaction

Speaker

Thomas Noll

8:00 PM

8:10 PM

Concert

Session | **Location:** Olin Concert Hall in Franklin W. Olin Humanities Building

8:10 – 9:30 PM (1h 20m)

Concert: Hommage à Tom Johnson

Location

Olin Concert Hall in Franklin W. Olin Humanities Building

9:30 PM

Wed, June 24

9:00 AM

Algebraic and Topological Perspectives on Scale Theory, Harmony, and Neo-Riemannian Transformations: Part 1

Session | Location: Olin Concert Hall in Franklin W. Olin Humanities Building

9:00 - 9:25 AM (25m) **All-Interval Series in Cyclic Spaces**

Speaker
Ethan Bonnell

9:35 - 10:00 AM (25m) **Alternative Symmetries and Systems**

Speaker
Luis R. A. Finotti

10:10 - 10:35 AM (25m)

A Matrix Representation of Lewin Duality, and Dualizing Operators for Dual Groups of Triadic Transformations

Speakers
Thomas M. Fiore, Thomas Noll

10:45 - 11:10 AM (25m) **A Theory of Scales and Orbit Covers**

Speaker
Drew Flieder

11:15 AM

11:15 AM

Coffee Break, Registration Pickup, or Registration

Break | Location: Near Olin Concert Hall in Franklin W. Olin Humanities Building

11:30 AM

11:35 AM

Algebraic and Topological Perspectives on Scale Theory, Harmony, and Neo-Riemannian Transformations: Part 2

Session | Location: Olin Concert Hall in Franklin W. Olin Humanities Building

11:35 AM - 12:00 PM (25m)

Symmetries of the Modal Color Theory Hyperplane Arrangements

Speaker
Paul M. Sherrill

12:10 - 12:35 PM (25m)

Wick-Rotated Fibonacci Polynomials from the Scale-Step Interval Patterns of the Pentatonic and Diatonic Collections

Speaker
M. A. Coury-Hall

12:40 PM

12:40 PM

Lunch Break: On Own at Cafeteria or Restaurants

Break | Location: On Own at Cafeteria or Restaurants

1:40 PM

1:50 PM

Algebraic and Topological Perspectives on Scale Theory, Harmony, and Neo-Riemannian Transformations: Part 3

Session | **Location:** Olin Concert Hall in Franklin W. Olin Humanities Building

1:50 - 2:15 PM (25m)

Harmonic Qualities of Generic Sets

Speaker

Jason Yust

2:25 - 2:50 PM (25m)

Modeling the Harmonic Syntax of Rock Music with Hidden Markov Models

Speaker

Matthew Anthony Ludwig

3:00 - 3:25 PM (25m)

An Algebraic-Symmetric Analysis of Counterpoint and Modulation in the Music of Claudio Monteverdi

Speaker

Octavio Agustin-Aquino

3:35 - 4:00 PM (25m)

Planar Projections of Tone Systems and Faithful Keyboards

Speaker

Marek Zabka

4:05 PM

4:10 PM

Communication Performance

Session | **Location:** Olin Concert Hall in Franklin W. Olin Humanities Building

4:10 - 4:45 PM (35m)

Functional Harmony After Tonality: Composing with Orbit Covers

Speaker

Drew Flieder

4:55 - 5:30 PM (35m)

An Application of Alternative Symmetries and Systems

Speaker

Ciro Visconti

5:35 PM

5:35 PM

MatheMusical Virtual Museum & Planet Voices by Gilles Baroin

Session | **Location:** New Annandale House (Center for Experimental Humanities)

5:35 - 6:05 PM (30m)

MatheMusical Virtual Museum & Planet Voices by Gilles Baroin, Wednesday

Speaker

Gilles Baroin

6:10 PM

5:40 PM

Dinner Break: On Own at Cafeteria or Restaurants

Break | **Location:** On Own at Cafeteria or Restaurants

6:45 PM

6:45 PM

Walk 15 Minutes to László Z. Bitó '60 Conservatory Building

Break | **Location:** Bard College, Annandale-on-Hudson, New York, USA

7:00 PM

7:00 PM

Keynote Address

Session | **Location:** László Z. Bitó '60 Conservatory Building

7:00 – 8:00 PM (1h) **Keynote: Noam Elkies TBA**

Speaker

Noam Elkies

8:00 PM

8:10 PM

Concert

Session | **Location:** László Z. Bitó '60 Conservatory Building

8:10 – 9:30 PM (1h 20m) **Concert: Participant Compositions and Performances**

Location

László Z. Bitó '60 Conservatory Building

Description

Composer: Kateri Doran

Performers: Kateri Doran (flute), Saoirse Doran (clarinet, piano)

Quantum Loops — solo flute (ca. 6 min)

Mirror Loops — flute and clarinet (ca. 3 min)

Euler's Toccata — solo piano (ca. 3 min)

Composer: Octavio Agustín-Aquino

Performer: Octavio Agustín-Aquino (guitar)

Gabriela (ca. 8:30 minutes in total)

La toninera

Camila

Ximena

Composer: Brian Martínez Rodríguez

Performer: Octavio Agustín-Aquino (guitar)

Preludios de bitácora: I. Bitácora de la vista sobre el mar (ca. 4 minutes)

Other Composers and Performers from the Society for Mathematics and Computation in Music

TBA

Composer: Clifton Callender

TBA

Composer: Jason Yust

Performers: Ensemble TBA

Prime Meridian (ca. 6 min)

9:30 PM

Thu, June 25

9:00 AM

Mathematical Approaches to Music Cognition, Pitch Perception, Consonance-Dissonance, and Performance

Session | **Location:** Olin Concert Hall in Franklin W. Olin Humanities Building

9:00 – 9:25 AM (25m) **Towards a Formalization of Fretboards and Gestural Effort**

Speaker

Matt Chiu

9:35 – 10:00 AM (25m)

Transformational Analysis of Geometric Nets under Isotonicity Constraints

Speaker

Kristina Hurajova

10:10 – 10:35 AM (25m)

Emergent Circular Structures in Multi-Sensory Affective Spaces: A Topological Analysis of Music-Taste Correspondences

Speaker

Bruno Mesz

10:40 – 11:05 AM (25m)

Coffee Break, Registration, and MatheMusical Virtual Museum & Planet Voices by Gilles Baroin

11:10 – 11:35 AM (25m)

Consonance Ratings of Most Even Tetrachords Obtained by Variation of Phases

Speaker

Luis Nuno

11:45 AM – 12:10 PM (25m)

Sound and Visual Objects in n Dimensions in the Labyrinth of Time

Speakers

Gilles Baroin, Stephane de Gerando

12:20 – 12:45 PM (25m)

Perceptual Signal Analysis and Eigenvalue-Weighted Metrics for Musical Audio Quality Assessment

Speaker

Sanjay Majumder

12:50 PM

12:50 PM

Lunch Break: On Own at Cafeteria or Restaurants

Break | **Location:** On Own at Cafeteria or Restaurants

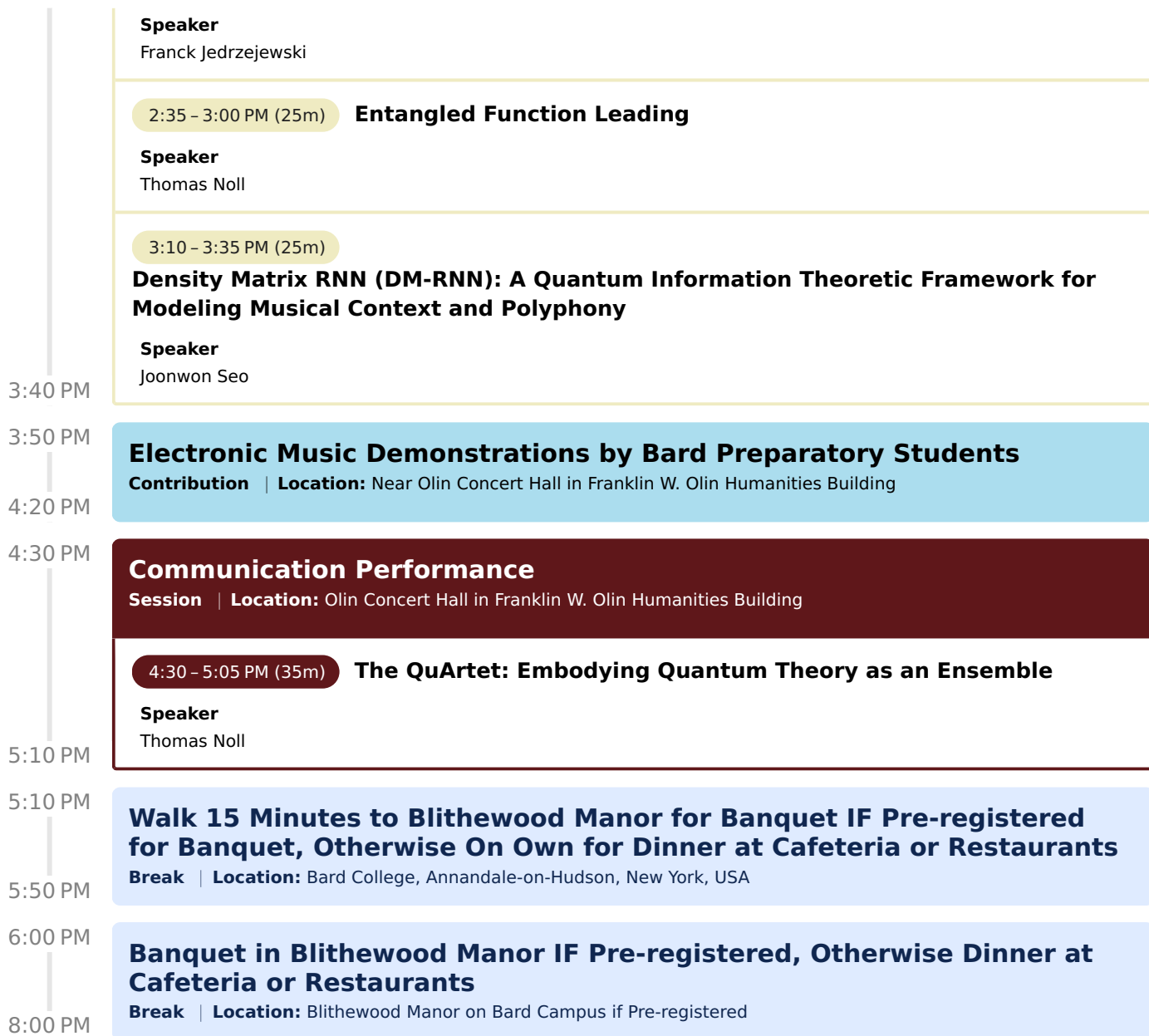
1:50 PM

2:00 PM

Quantum Theory and Music

Session | **Location:** Olin Concert Hall in Franklin W. Olin Humanities Building

2:00 – 2:25 PM (25m) **Entropy of Quantum Farey Tunings**



Fri, June 26

9:00 AM

Algorithms and Modeling for Music and Music Related Phenomena

Session | **Location:** Olin Concert Hall in Franklin W. Olin Humanities Building

9:00 – 9:25 AM (25m)

The Predictive Benefit of Order Increases in Melodic N-Gram Models

Speaker

David Temperley

9:35 – 10:00 AM (25m)

The Operatic Voice (I): Survey of Mathematical and Computational Models

Speaker

Sara Sabag-Sabja

10:05 – 10:25 AM (20m)

Coffee Break, Registration, and MatheMusical Virtual Museum & Planet Voices by Gilles Baroin

10:30 – 10:55 AM (25m)

The Operatic Voice (II): Characterization of Squillo: Acoustic Parameters and Perceptual Validation

Speaker

Sara Sabag-Sabja

11:00 AM

11:10 AM

All Invited: Meeting of the Society for Mathematics and Computation in Music

Contribution | **Location:** Olin Concert Hall in Franklin W. Olin Humanities Building | **Speakers:** Mariana Montiel, Gonzalo Romero-Garcia, Thomas Noll, Paco Gomez, Clifton Callender, Thomas Fiore, Pawel Dlotko

Description

- i. General synthesis of activities over the last 2 years (Mariana)
- ii. Website (Gonzalo, Thomas Noll)
- iii. Publications Committee Report (Paco Gómez, Cliff Callender)
- iv. Financial Report (Tom Fiore)
- v. Elections (Gonzalo, Thomas Noll)
- vi. Presentation of MCM 2028 in Warsaw (pre-recorded by Pawel Dlotko) (Tom Fiore, Mariana)

12:10 PM

12:10 PM

Lunch Break: On Own at Cafeteria or Restaurants

Break | **Location:** On Own at Cafeteria or Restaurants

1:10 PM

1:15 PM

Computational Approaches to Music

Session | **Location:** Olin Concert Hall in Franklin W. Olin Humanities Building

1:15 – 1:40 PM (25m)

Automated Harp Pedaling: A Graph-Theoretic Approach to Pitch Spelling and Pedal Settings

Speaker

Clifton Callender

	<p>1:50 - 2:15 PM (25m)</p> <p>An AI-Driven End-to-End Multimodal Architecture for Automatic Music Plagiarism Detection</p> <p>Speaker Brian Martinez-Rodriguez</p>
	<p>2:25 - 2:50 PM (25m) TransFolk: Transformer-Based Generation of Folk Melodies</p> <p>Speaker Brian Martinez-Rodriguez</p>
<p>3:30 PM</p>	<p>3:00 - 3:25 PM (25m) A New Version of OMM for Melodies and Rhythms</p> <p>Speaker Carlos Agon</p>
<p>3:30 PM</p>	<p>Applications of Mathematics to Music Theory Analysis of Composers and Styles</p> <p>Session Location: Olin Concert Hall in Franklin W. Olin Humanities Building</p>
<p>4:00 PM</p>	<p>3:30 - 3:55 PM (25m)</p> <p>Quantifying Costere's Polarization of Pitch-Class Collections via Jensen-Shannon Divergence</p> <p>Speaker Fernando Gualda</p>
<p>4:10 PM</p>	<p>Communication Performance</p> <p>Session Location: Olin Concert Hall in Franklin W. Olin Humanities Building</p>
<p>4:50 PM</p>	<p>4:10 - 4:45 PM (35m)</p> <p>Rotation: An Algorithmic Musical Work Based on Temporal Translations, Pattern Variations, and Musical Tilings</p> <p>Speaker Paul Lascabettes</p>
<p>4:50 PM</p> <p>5:00 PM</p>	<p>Closing</p> <p>Contribution Location: Olin Concert Hall in Franklin W. Olin Humanities Building Speakers: Mariana Montiel, Charles Doran</p>