



The Microtonal Guitar: Liberating Fretted Instruments from the Confines of 12-Tone Equal Temperament

Dylan Rodgers

While many music historians associate the lute, guitar, and other Western fretted musical instruments with the rise of equal temperament, such instruments were never truly bound to this theoretical model of equally spaced semitones. Some of the earliest European fretted instruments, such as the orpharion or the lute, most often did not have their frets arranged according to equal temperament; instead, their fretboards typically conformed to the structures of Pythagorean tuning and various historical temperaments such as meantone or well-temperament. Yet, in tandem with the growing hegemony of equal temperament, such historical tuning systems fell into disuse beyond the Baroque era. As a result, since its emergence by the middle of the 19th century, the modern guitar has broadly been restricted to 12-tone equal temperament. However, this has never limited instrumentalists from realizing other systems of tuning and temperament on their guitars.

Perhaps the first microtonal guitarist was René François Lacôte, a French luthier who, in 1852, designed and constructed a guitar with small metal frets placed on movable pieces of ebony which ran along tracks beneath each string of the guitar. Each of the movable frets could only be adjusted by small amounts and could not be removed without dismantling an entire track along the fretboard. This limitation led Turkish scholar Tolgahan Çoğulu to invent his own “Adjustable Microtonal Guitar” in 2008. This customizable microtonal guitar follows the same general design of Lacôte’s, with small frets running along channels beneath each string. However, with Çoğulu’s model, one is able to insert and/or remove frets entirely without restrictions. Çoğulu’s “Adjustable Microtonal Guitar”



Image 1: Three guitars freed from 12-tone equal temperament. Photo by author.

fretboards have recently become available for purchase, with classical, acoustic, electric and bass models shipping worldwide.¹ For the past several decades, perhaps the leading scholar on microtonal guitars has been the Los Angeles-based, Grammy Award-winning guitarist John Schneider.² Other notable microtonal guitarists include the early 20th-century Mexican com-

1. See <https://tolgahancogulu.com/>

2. For specifics on his various microtonal guitars as well as video clips of his performances see <https://johnschneider.la/>

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News from the Editor's Desk

Dear colleagues,

It is with great pleasure that I send out the latest edition of the AMIS *Newsletter*. This issue, which comes out just before our annual meeting, is full of information for the upcoming conference, as well as interesting articles and introductions to last year's Gribbon awardees.

Our feature article is written by Dylan Rodgers, a Small Research Grant recipient. In this article, Dylan shares his project of creating guitar necks that "liberate" the guitar from the 12-tone scale. Continuing with the theme of young scholars' research, please enjoy the short articles from four of the 2022 Gribbon Award scholars as they introduce themselves and their research.

Also included in this issue is the programme for the Memphis meeting, with valuable information regarding locations and timings, as well as the announcement of the 2023 AMIS awards. Although a little dry, but no less important, are the 2022 Minutes of the Business Meeting. It is important for all AMIS members to review the minutes before the next Business Meeting on June 2, 2023.

As always, we welcome short submissions (maximum 500 words) as well as short articles (maximum 2,500 words). Email all submissions and suggestions to: amisnewsletter@gmail.com.

☞ Sarah Deters
Editor

Information for conference attendees

Dear conference attendees,

We look forward to welcoming you to Memphis!

Here are a few more details about the conference:

- If you plan on making handouts, there are about 65 attendees registered.
- If you are not staying at the Holiday Inn or in the dorms and you plan to drive to campus, you'll need a parking pass. Please let me know if you do. Plentiful parking is available at the Scheidt Family Performing Arts Center (3800 Central Ave), where conference activities will be held.

For those staying in the dorms:

- The dorm complex is called Centennial Place, and the address is 3615 Central Ave, Memphis, TN 38111
- You should go directly there on arrival. The front desk is staffed 24 hours a day, and you will be able to register whenever you arrive.
- Linens are provided, including a towel, but you need to bring your own toiletries.

☞ Janet Page
President

2023 ANNUAL AWARDS

The Curt Sachs Award

Named for one of the founders of the modern systematic study of musical instruments, the Curt Sachs Award was established by the American Musical Instrument Society to honor those who



have made important contributions toward the goals of the Society. This year's award has been granted to **Darcy Kuronen**.

Following his graduate studies at the University of South Dakota and a position there as research associate at what is now the National Music Museum, Darcy began his ascent at the Museum of Fine Arts, Boston, in 1986 as Department Assistant, then Curatorial Assistant in 1989, Keeper of Musical Instruments in 1995, and finally Curator of Musical Instruments from 1999 to 2020. Besides contributing to several books on musical instruments during his tenure at MFA, Darcy authored two books on the collection including a catalog of his seminal guitar exhibition "Dangerous Curves." He contributed dozens of articles and reviews to JAMIS and other journals, including "The Musical Instruments of Benjamin Crehore" in *Journal of the Museum of Fine Arts, Boston*. Besides winning for him the 1994 Densmore award, the Crehore article characterized Darcy's important career contribution to the study of a rich regional heritage of instrument making, especially including Boston piano makers, and expanding outward, eventually becoming a database of surviving musical instruments throughout New England and the Northeast. Please see <https://www.amis.org/post/darcy-kuronen-receives-the-2023-curt-sachs-award> for a full bio.

The Frances Densmore Prize

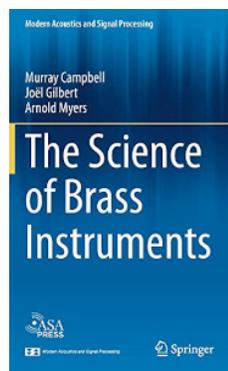
Named to honor Frances Densmore (1867–1957), the pioneering ethnographer, the Densmore prize is awarded for the most distinguished article-length

work in English that best furthers the Society's goal of promoting "the study of the history, design, and use of musical instruments in all cultures and from all periods." The 2023 Densmore recipient is **Jennifer Kyker** for an article titled "Music under the Ground: Ethnomusicological Research on the Ground-Bow in Africa," published in 2021 in the journal *Ethnomusicology*, vol. 65, no. 2.



Based on ethnographic fieldwork in Zimbabwe, Kyker's article demonstrates how the categorization of musical instruments continues to be a complex and sometimes ambiguous practice, notwithstanding the intended rigor of the various taxonomic systems we employ to aid such categorization. Kyker also uses the instrument to critique certain aspects of our scholarly activities, such as the general lack of attention paid to instruments associated with children's music-making or the geographical bias that frequently pertains to the concept of "ethnomusicology at home."

Nicholas Bessaraboff Prize



The Bessaraboff prize is awarded annually for the best book-length publication in English that furthers the goals of the Society. The prize committee has made two awards for 2023, for two equally distinguished, but very different, contributions to organology: **Murray Campbell, Joël Gilbert, and Arnold Myers** for *The Science of Brass Instruments* (Cham, Switzerland: Springer Nature, 2021); and **Robert Adelson** for *Erard: A Passion for the Piano* (New York: Oxford University Press, 2021).

D A Y ONE

PROGRAM

Location: Scheidt Family Performing Arts Center
University of Memphis, 3800 Central Avenue

May 31—June, 2023



WEDNESDAY

MAY 31



Welcome to Memphis!

Student papers are marked *

1:00pm-4:00pm	Registration (Lobby)
5:00pm	Opening reception (Lobby)
6:30pm	Board of Governors' meeting (place TBA)

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TWO

THURSDAY

JUNE 1

8:00am	Registration, Coffee, Continental Breakfast (Lobby)
8:30-8:45am	Welcome (SFPAC 1204)
8:45-10:15am	<p>Session 1 (SFPAC 1204): Bagpipes, Buttons, and Banjos Chair: Núria Bonet</p> <ul style="list-style-type: none"> ◆ Sounding “Home”: The Banjo and Irish Return Migration – Maeve Carey-Kozlark* ◆ The Metropolitan Museum’s Bagpipe Collection: Aesthetics, Materials, and Symbolism – Cassandra Balosso-Bardin ◆ Characteristics of the 142-tone bandonéons made by the Alfred Arnold factory – Hannes Vereecke
10:15-10:45am	Break
10:45-12:15pm	<p>Session 2 (SFPAC 1204): Sound Studies & Artistic Research Chair: Matt Zeller</p> <ul style="list-style-type: none"> ◆ The ‘Wiener’ Tuba: A Mixed-Methodological Approach to Instrument Studies and Artistic Research – Jack Adler-McKean (virtual) ◆ Sound Design in Japanese Gardens: A Sound Studies Approach to Organology – Devanney Haruta* ◆ Cognitive Organology?: A Case Study in Reconstructing Musical Ecology at the Clavichord – Massimiliano Guido & Joel Speerstra
12:15-2:00pm	<p>Lunch (box lunches, Lobby)</p> <ul style="list-style-type: none"> ◆ David Evans and his Jug Band (SFPAC 1215) ◆ JAMIS Editorial Board Meeting (SFPAC 2117)
2:15-3:45pm	<p>Session 3 (SFPAC 1204): Harps Chair: Carol Lynn Ward-Bamford</p> <ul style="list-style-type: none"> ◆ The Paraguayan Harp: A 21st-Century Symbol of Paraguayan Cultural Identity – Alfredo Colman (virtual) ◆ Studying the Diversity of Central African Harps by the Soundbox, the Number of Strings and the Carvings – Sylvie le Bomin ◆ How and Why Describe a Musical Instrument? The Example of the Central African Harp – Salomé Strauch*
3:45-4:15pm	Break
4:15-5:45	<p>Session 4 (SFPAC 1204): Keyboards Chair: John Watson</p> <ul style="list-style-type: none"> ◆ Instruments Ahead of Their Time – the “2 payre of virginalles in one coffer” of 1530 – Darryl Martin ◆ The Remarkable Design of a Fleischer Harpsichord – Bastian Neelen* ◆ Reconstructing the Hauslaib Claviorgan – Kamiel Dockx*
<p>Dinner on your own Informal Beale Street visit (tour with Tyler Frits, 7:00)</p>	

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THREE
FRIDAY
JUNE 2**

8:00am	Coffee, Continental Breakfast (Lobby)
8:30-10:00am	<p>Session 5 (SFPAC 1204): Strings Chair: Jayme Kurland</p> <ul style="list-style-type: none"> Historical and Dialectical Materialism in the Study of the Cittern during the Sixteenth and Seventeenth Centuries: Towards a Theory of Musical Instruments – Esteban Mariño Garza (virtual) The Santo Serafin Violin in the Museo Correr: Conservation Treatment and new Organological Discoveries – Riccardo Angeloni The Jarana as Baroque Guitar: A Neocolonial Claiming of Jarocho Instrument-Making Traditions – Wesley Somers*
10:00	Break
10:30-12:00pm	<p>Session 6 (SFPAC 1204): Music Machines Chair: Allison Alcorn</p> <ul style="list-style-type: none"> New Wings for Song: The Intriguing Story of America’s Flirtation with the Electric Piano – Thomas Strange The Jukebox: Examining a democratic musical instrument – Núria Bonet Out in Front: A Closer Look at the American Cabinet Piano-Player – William E. Hettrick
12:00-12:30pm	Collecting Clarinets— Nophachai Cholthitchanta (SFPAC 2117)
12:30-2:00	<p>Lunch (box lunches, Lobby)</p> <ul style="list-style-type: none"> AMIS General Meeting (SFPAC 1204)
2:15-3:00pm	<p>Session 7 (SFPAC 1204): Panel Discussion Chair: Jayson Dobney</p> <ul style="list-style-type: none"> <i>Musical Crossroads: Stories Behind the Objects of African American Music</i> – Timothy Anne Burnside, Hannah Grantham, Steven Lewis, Dwandalyn Reece
3:00pm	Break
3:30-4:30pm	Music Exhibits at the Art Museum of the University of Memphis (AMUM) with Tucker Nance
4:45-5:15pm	News on the MIRCAT project (SFPAC 1204) – John Watson, et al.
	Dinner on your own
7:30pm	Music Event TBA (SFPAC 1215) Gibbon Scholars get-together

D A Y FOUR SATURDAY JUNE 3	8:00am	Coffee, Continental Breakfast (Lobby)
	8:30-10:00am	Session 8 (SFPAC 1204): Instruments in America Chair: Carolyn Bryant <ul style="list-style-type: none"> ◆ Instrument of Power: The Side Drum and Slavery in North America – Jayson Dobney ◆ “Powers and beauties unknown before”: Late-Nineteenth Century Innovation in American Pipe Organ Construction and Its Implications for Performers – Abraham Ross* ◆ A New England Viol Consort c.1820: New England Alto and Tenor Viols in Historical and Musical Context – Loren Ludwig
	10:00am	Break
	10:30-11:30am	Session 9 (SFPAC 1204): Instruments in China in Cross Cultural Perspective Chair: Michael Suing <ul style="list-style-type: none"> ◆ Kangxi, Father Amiot, and “Improvements” to Ritual Instruments in Eighteenth-Century China – Stewart Carter and Zhiyu (Alex) Zhang ◆ Why Seven: Polychordia and String Standardisation of Ancient Greek Lyre and Early Chinese Guqin – Patrick Huang*
	11:30-12:30pm	Session 10 (SFPAC 1204): Pedagogy Chair: Bradley Strauchen-Scherer <ul style="list-style-type: none"> ◆ Start ‘em Young: Musical Instruments in Children’s Literature – Allison Alcorn ◆ Reanimating the Intangible: Audio-visual Content as a Device for Representing World Musical Instruments – Eddie Chia-Hao Hsu
	12:30pm	Lunch (Lobby)
	1:30-3:30pm	Session 11 (SFPAC 1204): Woodwinds & Brass Chair: Jim Kopp <ul style="list-style-type: none"> ◆ “The times for experiments are almost over”: The New York Pro Musica and the Reproduction of Historical Wind Instruments – Patrick Connor Dittamo* ◆ A(n) (Un)Missing Link Between Keys and Valves: Three Keyed Trumpet Solo Works Arranged for Early Valved Trumpet, Flügelhorn, and Valved Trombone by Joseph Kail for the Prague Conservatory – Robert Warren Apple ◆ Abel Siccama and the Development of a Rational, Modular Key System for the Flute – Robert Bigio ◆ La Couture-Boussey: A Look at Musical Instrument Making – Emanuele Marconi (virtual)
	3:30pm	Break
	4:00-4:40pm	Lecture-Demonstration (SFPAC 1204) <ul style="list-style-type: none"> ◆ What the Heck is the Sewerphone? – James Cunningham & Glen Gillis
	5:30pm	Meet & mingle (Lobby)
	6:00pm	Banquet (Lobby)

poser Julián Carrillo and mid-century American expressionist Harry Partch.

Although I have been an instrumentalist for nearly two decades, I was first introduced to the concept of microtonality relatively recently. Shortly thereafter, I began studying issues of tuning and temperament under ethnomusicologist Dr. Scott Marcus at the University of California, Santa Barbara (UCSB). It was in these studies that I first learned about the inherent compromises of equal temperament: in order to be able to play in all twelve keys, one must accept imperfect consonant intervals. Continued study of this issue led me to realize how various historical tuning systems that predate equal temperament, such as meantone, sought to arrange our familiar twelve notes in their pursuit of perfect consonance. Under Dr. Marcus, an expert in the music of the Middle East, I also began performing Arab music, which employs a 24-tone chromatic scale³ and Turkish music, whose dominant tuning theory espouses a subset of 53-tone equal temperament.⁴ I then pivoted my studies of non-Western music to Javanese gamelan, which employs not one, but two unique tuning systems that can be considered both irrational and non-standardized.⁵ As a guitarist, I became extremely interested in how these various systems of tuning and temperament might map onto the standard guitar. Utilizing generous grants from the University of California Undergraduate Research and Creative Activities office as well as the American Musical Instrument Society, I set out to modify the fretboards of four guitars in an effort to detach the instrument from the confines of equal temperament.

From the era of Pythagoras (570 BCE – 490 BCE), musical intervals have been conceptualized in terms of string lengths. For example, the octave of any open string occurs when only half of the entire string length is allowed to ring out. The guitar exemplifies this natural phenomenon quite effectively as the octave fret on any guitar is situated exactly halfway along the length of the strings. This methodology can be applied, as Pythagoras and countless theorists throughout history have done, to conceptualize any possible musical interval (e.g. P5s occur when $2/3$ s of an open string is allowed to ring out, M2s occur when $8/9$ s of an open

3. Marcus, Scott Lloyd. "The Periodization of Modern Arab Music Theory." *Pacific Review of Ethnomusicology*, vol. 5, 1989, pp. 35-36.

4. Ederer, Eric. *The Theory and Praxis of Makam in Classical Turkish Music 1910-2010*. PhD. dissertation, University of California Santa Barbara, 2011, pp. 61-76.

5. Perlman, Marc and Carol L. Krumhasl. "An Experimental Study of Internal Interval Standards in Javanese and Western Musicians." *Music Perception: An Interdisciplinary Journal*, vol. 14, no. 2, 1996, pp. 95-97. These two scales have no theoretical relationship with any Western system of tuning and temperament; their tones do not correspond to any of the notes of 12-tone equal temperament.

string is allowed to ring out, etc.).⁶ Therefore, in the process of refretting my project guitars, I had to determine the precise theoretical string lengths of every desired interval in order to determine the proper location of each fret. However, when a guitarist depresses a string downwards onto any fret, they increase the tension of the string which, in turn, causes the intended pitch to sharpen. Consequently, there is always a slight discrepancy between the pitch determined by tuning and temperament arithmetic and the pitch that is actually yielded by any given fret.⁷ In an effort to remove the effects of this phenomenon on my non-equal temperament guitars, I concluded that my fret placements would not be wholly determined by arithmetic. Along each individual string, minuscule adjustments had to be made to each fret position in order for every fret to accurately yield their intended pitch.⁸

The following is a brief description of the fretting systems of three of the four guitars that I modified:

Quartertone Guitar (24-Tone Equal Temperament)



Image 2. Guitar fretted according to 24-tone equal temperament.
Photo by author.

6. Cazden, Norman. "Musical Intervals and Simple Number Ratios." *Journal of Research in Music Education*, vol. 7, no. 2, 1959, pp. 197-206.

7. Dolatta, David. *Meantone Temperaments on Lutes and Viols*. Indiana University Press. 2016, pg. 146.

8. As one might expect, this meticulous fretting process approaches pinpoint accuracy, yet extraneous factors such as finger pressure, fret-wear and string age, etc. can cause slight deviations in pitch. In trials with my project guitars, certain fretted notes deviated from their intended pitches by 0.7 Hz at most.

24-tone equal temperament, also known as the quartertone system, is closely related to the 12-tone system that we are familiar with except for the fact that it divides each whole step not into two semitones, but four quartertones. In order to achieve this system, it was not necessary to place 24 frets within an octave in order for every note of the quartertone system to be readily available along the fretboard. This layout of frets mirrors the quartertone guitars of the Australian rock band King Gizzard and the Lizard Wizard as well as the French fusion group Gondhawa. Recently, two guitar models fretted in this style have been released commercially, the Eastwood Hi-Flyer Phase 4 MT and the Altamira N300MT. This unique fretting pattern aims to provide a visual guide for any standard guitarist by preserving certain positions of 12-tone equal temperament while maintaining accessibility to all 24 notes of the quartertone system. Any guitarist can achieve this with the simple addition of six ordinary frets to their standard guitar. While I created this guitar for the performance of traditional Arab music, which employs a theoretical 24-tone chromatic scale, it is also capable of approximating the unique microtonal intervals of classical Persian and Turkish folk music.⁹ It is also fully capable of realizing 20th-century Western compositions for 24-tone equal temperament by composers such as Charles Ives or Julián Carrillo.

1/4-Comma Meantone Guitar



Image 3. Guitar fretted in 1/4-comma meantone temperament.
Photo by author.

9. See the comment below on a separate tuning system used for Turkish classical music.

The next tuning system I grappled with is known as 1/4-comma meantone. Prior to the emergence of harmony in Western art music, the Pythagorean tuning system, with acoustically pure fifths, dominated Europe. Yet, this Pythagorean system yielded major thirds that are often described as “sharp” and “out-of-tune.” Meantone, which was first described by Bartolomé Ramos de Pareja in 1482, served as the Renaissance’s solution to this harmonic dissonance.¹⁰ Accordingly, throughout the Renaissance in Europe, 1/4-comma meantone served as the predominant temperament for the performance of art music, although other meantone systems were also prevalent (e.g. 1/3-comma meantone, 2/7-comma meantone, etc.).¹¹ 1/4-comma meantone achieves a pure and sonorous major third by narrowing the distance of a perfect fifth by about 5.4 cents. While, within this structure of meantone, fifths are distinguishably flatter than “perfect,” it is generally accepted that, the purity of the thirds in meantone temperament disguise the slight flatness of the fifths. While the 1/4-comma meantone guitar is capable of realizing any music which utilize the standard twelve notes we are familiar with, it is perhaps best fit to perform lute music of the Renaissance. This is due to the fact that the broad majority of Renaissance lutes were fretted according to meantone temperament.¹² While Renaissance lute music has become a major source for the modern classical guitar repertoire, practically all present-day renditions of such music are in 12-tone equal temperament. Therefore, the 1/4-comma meantone guitar is capable of providing keen insight into how such lute music of the Renaissance were intended to be heard by their original composers.

Gamelan Pélog Guitar

Over the past few years, having studied various traditions of the Javanese art music known as gamelan, I became captivated by the unique sound of gamelan intervals. Thus, as both a guitarist and a member of the UCSB gamelan, I set out to create a guitar that is capable of performing the musical intervals and scales of Javanese gamelan.

10. Lindley, Mark. “An Historical Survey of Meantone Temperaments to 1620.” *Early Keyboard Journal*, vol. 8, 1990.

11. Daum, Alisa. “The Establishment of Equal Temperament.” *Music and Worship Student Presentations*, no. 6, 2011, pg. 6, https://digitalcommons.cedarville.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1005&context=music_and_worship_student_presentations.

12. Wead, Adam. *Lute Tuning and Temperament in the Sixteenth and Seventeenth Centuries*. DMA dissertation, Indiana University, 2014, pp. 2-29, <https://scholarworks.iu.edu/dspace/bitstream/handle/2022/18424/Wead%2C%20Adam%20%28DM%20EMI%29.pdf?sequence=1&isAllowed=y>.



Image 4. Guitar fretted according to the pitches of the UCSB gamelan pélog. Photo by author.

Across the island of Java, not one, but two distinct tuning systems are employed by gamelan ensembles; these intervallic systems are known as sléndro and pélog. While pélog is considered the older and more traditional tuning structure, both systems are prevalent across Java.¹³ Likewise, most Javanese gamelan ensembles maintain two distinctive sets of instruments, one for sléndro and the other for pélog. Interestingly, the tuning system of sléndro consists of only five tones, while the pélog system is comprised of seven tones. For the sake of my project, I centered my research around the pélog tuning system due to the fact that the 2022-2023 performances of the UCSB gamelan have been conducted on our pélog set of instruments.

Unlike the other tuning systems of focus for my project (e.g. Pythagorean, meantone, equal-temperament, etc.), the intervals of pélog are not derived from any sort of mathematical basis, meaning it can be considered an irrational tuning system. Instead of being determined by arithmetic, the idiosyncratic spacing of the seven pélog tones within an octave gamut comes from an inherited aural tradition. Therefore, the tuning of the gamelan is dependent on master gamelan-makers, who spend months hammering and filing away at a set of instruments before they are considered sonorous and in-tune. As there exists no standard of pitch for gamelan music

13. North, Richard. Personal Communication. 26 April 2023. While both sléndro and pélog are prevalent on the island of Java, certain regional traditions may exhibit a tendency towards one tuning or another.

(in the sense that A4 = 440hz across much of the world), I decided to fret my pélog guitar according to the specific tones of our UCSB gamelan pélog.¹⁴ In order to accomplish this, I measured the frequencies of the seven pélog tones across four melodic instruments of the UCSB gamelan. I then took these frequency measurements, which showed a pitch deviation across the four instruments of up to 8 Hz, and averaged them out; the tones yielded from this averaging would become those of my pélog guitar. A mid-June performance featuring the pélog guitar accompanied by the UCSB gamelan will be available on the UCSB Department of Music's YouTube channel immediately following the concert.¹⁵

Despite near-universally held assumptions that the guitar and similar fretted instruments are bound to 12-tone equal temperament, we now may recognize that this not necessarily the case. With simple alterations to the fretboard, any guitarist can realize alternative systems of tuning and temperament and, thus, can liberate themselves from the strict confines of 12-tone equal temperament.

The fourth and final guitar for this research project will be fretted according to the theoretical structure of classical Turkish makam music. It is expected to be completed by the end of May 2023.



14. Sutton, R. Anderson. "Asia / Music of Indonesia." *Worlds of Music: An Introduction to the Music of the World's Peoples*, 5th ed., pp. 299-308.

15. <https://www.youtube.com/c/UCSantaBarbaraDepartmentofMusic/videos>

MEET THE GRIBBONS!



Fanny Guillaume-Castel

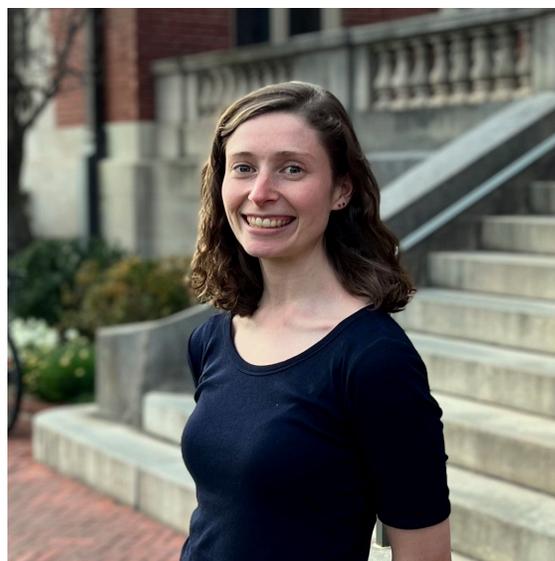
Having attended my first AMIS conference in 2021 online, it was my pleasure to be able, thanks to the William E. Gribbon award, to attend the 2022 conference in Calgary, Canada.

I am currently writing up my PhD thesis on the pedal harp, at the Royal College of Music in London, under the supervision of Professor Gabriele Rossi Rognoni (Royal College of Music) and of Thierry Maniguet (Musée de la Musique – Philharmonie de Paris). My research focuses on the transformations of the pedal harp between 1750 and 1811. After its introduction to Paris, luthiers attempted to produce pedal harps quickly, creating a new shape and new mechanisms for it. Paris quickly became a centre for harp-making, with the aristocracy as the main clientele for the pedal harp. In the aftermath of the French revolution, many aristocrats and craftsmen chose to move to London, including musical instrument maker Sébastien Erard. His workshop flourished in London, and other makers quickly followed, making London the new hub for harp-making in Western Europe. I end my research in 1811, after the double-action pedal harp, which is the one still played today, was patented in Paris, a year after the London patent. Using a variety of sources, I wish to offer a comprehensive view of this particular time in the history of the pedal harp, particularly bringing a social and economic perspective on the makers and their business. I extensively

use surviving pedal harps from that period as a source to tell the history of the instrument. Each instrument contains signatures, dates, labels, or other information that can help me better understand a maker's production and way of business.

Presenting at the AMIS conference this past June was overall an exciting experience. I was able to present my research in a more fun way, by introducing myself as the harp detective, a nickname I was given when working at the Musée des Instruments de Musique in Brussels. It was a new way to approach an academic paper, by playing a bit more with my sources: instruments, iconography, music, manuscript archives, and newspapers. I was pleased and honoured with the welcome I received, and the encouragement given for my research, as several participants gave me tips about harps I was not yet aware of.

Beyond my presentation, I was happy to meet so many musical instrument researchers, with whom I shared discussions, ideas, and happy moments throughout the conference. The AMIS conference was an enriching experience, both professionally and personally, and I look forward to continuing to take an active part in the AMIS community as I continue my research.



Devanney Haruta

Attending the 2022 AMIS conference in Calgary this past June was such an enriching experience, and I'm grateful to have received a Gribbon Award,

which made my travel possible. Especially after the disruptions of the pandemic, it was wonderful to make connections with fellow graduate students and other organologically-minded attendees. Since last summer's conference, I have entered my second year of the Ph.D. in Musicology & Ethnomusicology at Brown University, where I am continuing to focus my research on musical instruments and materiality.

Just a few months ago in mid-February, my project *Piano (de)composition* was installed outside the Orwig Music Building on Brown's campus. This is a long-term installation of a baby grand piano that will be left outdoors, open to the elements and to public interaction for the next three to four years. *Piano (de)composition* challenges the notion that a piano must be in "good condition" to have musical value and expands the piano's possibilities for music-making. When I heard that the music department was getting rid of an old piano, rather than have it sent off to the dump (as is the unfortunately frequent fate of many pianos deemed beyond repair), I thought this would be a good opportunity to give this instrument a second life. Relocating the piano to a new home outdoors gives us a chance to see and hear how the instrument reacts to and performs with the environment through the changing weather and seasons. It also opens up opportunities for reflection on the relationship between sound, material, and environment, and our own interactions with and expectations for instruments. I am inspired by Ross Bolleter's *ruined pianos* and Annea Lockwood's *Piano Transplants* (1968-1982), both of which explore the sonic possibilities of pianos that break down under various environmental forces.

Over the course of the first couple months, the piano has already fascinated me in unexpected ways. The instrument directly reflects the weather (for example, wet and freezing conditions make for very sticky keys), and I'm learning new things about the piano's materials (a few days of rain taught me that the glue that attaches the key plates to the wooden keys is water soluble, after they all came loose and fell off in the rain!). I am documenting the gradual changes of the piano's sound and material on a blog site (link below), where I will follow the material, sonic, and social journey of the piano over the coming weeks, months, and years. I am also encouraging community interaction with the

instrument, and I hope that the piano can be a resource for creative projects.

In addition to my ongoing piano installation, I have also been researching the construction of "quiet" in Japanese gardens, examining various sound-making features that contribute to garden soundscape curation. I will be presenting on this research at the upcoming AMIS 2023 conference in Memphis, in a presentation that proposes using sound studies as a lens to examine our understanding of musical instruments. I look forward to seeing everyone there!

Link to *Piano (de)composition* blog: <https://sites.google.com/brown.edu/pianodecomposition/>



Chaehoon Lee

I would like to express thanks to all the AMIS committees for organizing the meeting and allowing me to present my work this year. The presented scientific work "The Serafin Violin Maker Family: Macro to Micro Level Approach for the Study of Two Violins Held in the Correr Museum in Venice, Italy" was performed at the Arvedi Laboratory of Non-invasive Diagnostics of the University of Pavia. The laboratory is located inside the Museo del Violino Cremona, Italy, where you can see valuable musical instrument works made by various well-known makers including Antonio Stradivari and colleagues. In addition, our laboratory conducts analysis protocols for scientific research that can be devoted to the conservation of musical instruments.

I am currently working on my Ph.D. in Chemistry at the University of Pavia. My dissertation is "Gel-

Cleaning Application to Historical Musical Instruments.” Gel-cleaning is an important procedure in the conservation field, due to its chemical characteristics and capability to have a selective cleaning action against chemical and biological degradation of the artwork surfaces. My research focuses on the development of natural polymer gel that can be applied to clean contaminants such as soil, sweat, etc. dispersed on the surfaces of Asian and Western musical instruments.

My background of study is in Conservation and Restoration at the Korean National University of Cultural Heritage, Korea. My research at that time was focused on Asian musical instruments’ surface treatment Nakdong technique and in parallel, I have finished a course on making violins at the Violin Makers Association of Korea, which shows my consistent interest in musical instruments. Also, I completed a conservation fellowship under Andrew W. Mellon at the Metropolitan Museum of Art and an internship at Gugak Center, Seoul, Republic of Korea.

My passion for musical instruments continues and I am always open to exploring!



Shanti Nachtergaele

I am very grateful to have received both a Small Research Grant for Students and Gribbon Award from AMIS to support my research and make it possible for me to attend and present at the annual meeting in Calgary last summer. It is exciting to be part of an organization that brings together so many different perspectives and provides such generous support for emerging scholars in the field. I look forward to attending future conferences and continuing to learn from and share re-

search with colleagues who share an interest in studying music from the perspective of the instruments that produce it.

I am currently pursuing a PhD in musicology at McGill University while also remaining active as a double bassist who specializes in historically informed performance. I completed a bachelor’s degree in double bass performance at Shenandoah Conservatory and a master’s degree in historical performance at the Royal Conservatoire of the Hague, where I first developed an interest in research on historical instruments and performance practices. I then decided to pursue a second master’s degree in music theory and history at Penn State University before moving onto my PhD at McGill. I am especially interested in interdisciplinary research that brings together the perspectives of research in various academic fields, performance, and instrument making.

My PhD research centers on the interface between performers and their instruments as a locus for the development of instrumental identity. My dissertation explores the developing identity of the professional double bassist in the period 1760–1890, focusing on how performers navigated the musical profession and how instruments mediated this process. Drawing on theoretical frameworks from material culture studies and the theory of sociomateriality, I argue that performers and their instruments form a constitutive sociomaterial entanglement: the history of the double bass cannot be separated from its players, and the identity of the double bassist cannot be separated from the instrument. I apply a variety of methodological approaches that elucidate the complex web of relations between instruments, individuals, and institutions in which identities of the double bass and its players were formed, challenged, and reconfigured. Behavioral archaeology complements the theory of sociomateriality by offering tools to help clarify and define the material aspects of sociomaterial entanglements. Additionally, practice-based research methods provide insights into how different performance idioms relate to the instrument’s diverse regional identities and to individual double bassists’ professional personas.

AMERICAN MUSICAL INSTRUMENT SOCIETY
BUSINESS MEETING, JUNE 10, 2022
STUDIO BELL, CALGARY

President's Welcome

Janet Page gavelled the meeting open at 12:50pm with a special welcome to new members.

Approval of 2012 Minutes

- At the president's request, it was moved (Bob Pyle) and seconded (Jayson Dobney) to approve the minutes of our last meeting (held on Zoom); motion carried by a voice vote.

President's Announcements

- Videotaping: Although our meeting is not being live-streamed, all sessions and this business meeting are being videotaped and will be available through the website for later viewing.
- Journal staff: Jim Kopp has retired from editorship. Robert Bigio has been appointed as the new editor. Carolyn Bryant will continue as associate editor. For the 2022 issue (in progress) Kopp will also serve as associate editor. Edmond Johnson has been appointed book review editor (on the retirement of Al Rice).
- Small grants: since the 2021 meeting was virtual, there were no Gribbon Travel Awards, instead a number of small grants were made to students for research; students who received these grants prepared proposals for the 2022 meeting, all of which were accepted. Janet mentioned that there are also possibilities for financial assistance for non-students.
- Membership: per Aileen Marcantonio, who now serves as registrar, current active membership stands at 285 (including 98 institutions). This is versus membership of 394 at this time last year.
- In memoriam: Janet expressed the society's regret at the death of Donald Sarles, long-time member and registrar for a dozen years.

Election Report

- In the absence of the secretary, Janet reported on the recent election. Michael Suing will continue as secretary, and three board members have been re-elected to a second term (Anne Acker, Jonathan Santa Maria Bouquet, and Geoffrey Burgess).

Treasurer's Report

- Ken Moore reported that the society's finances are in good shape, despite some additional publication expenses and lower membership numbers. He offered copies of his reports and the T. Rowe Price statement to anyone interested. He would also welcome advice and additional ideas about investments.

Gribbon Award Committee

- Jonathan Santa Maria Bouquet, chair of the committee, reported that awards were made to six students, of which five are attending. In addition, outreach awards were made to two additional students to assist them to attend the meeting; one was funded by an anonymous donor, the other by excess funds in the Gribbon account.

Journal Update

- Carolyn Bryant, associate editor, reported in the absence of editor Jim Kopp, who could not attend because he came down with Covid. She reported that the 2021 issue was mailed some time ago and that everyone should have their copy, and she displayed a list of eight articles accepted for the coming 2022 issue.

Newsletter Update

- Janet expressed thanks to editor Sarah Deters for producing a newsletter shortly before the meeting and making it available via the listserv. Sarah reported that this issue will soon be up on the website. There will two issues this year, with the second one reporting on the meeting. She requested short or long articles, announcements, and other communications.

2023 Meeting

- Janet announced that the next meeting will be in Memphis, sponsored by the University of Memphis. The meeting will be held in the new music building, with dormitory accommodations available at the university. Jeremy Tubbs is program chair; music librarian Joel Roberts is local arrangements chair. Janet pointed out that although there are not any major instrument collections in Memphis there is lots of music, and important musical traditions involving musical instruments abound. Looking at dates in mid-to-late May.

- As an additional attraction, Jayson has offered to plan an overnight group trip to New Orleans, either pre- or post-meeting.

Ethnomusicology and AMIS

- Jayme Kurland chairs an Ethnomusicology Working Group in AMIS, formed to encourage cross-pollination between ethnomusicology and organology, especially involving SEM and AMS
- Matthew Zeller reports that the American Musicological Society (AMS) has approved an Organology Study Group that will hold a programmed session and a business meeting at each AMS annual meeting. He and Lydia Chang co-chair the study group, which presently has some 80 members, a number of whom are AMIS members.

MIRCAT

- Darcy Kuronen spoke about several electronic initiatives, including MIRCAT (The Musical Instruments Research Catalog) and the Clinkscale Database, located at Earlypianos.org. A consortium of scholars, led by Darcy and John Watson, seeks a grant from AMIS for the MIRCAT project, and they have submitted a formal proposal to the Board of Governors.
- John Watson has taken on updating the Boalch listing of makers of harpsichords and pianos, and plans to expand it up to 1925 to include early makers of reproduction instruments.

Other Business

- Bob Pyle brought up the illustration on the cover of recent AMIS Directories, pointing out that parts of the image appear to be backwards, and questioning its use with the directory. Carolyn Bryant will attempt to find out where this illustration came from, and will work with Bob and Aileen (who prepares the directory) to choose a more suitable one.

Respectfully submitted, Carolyn Bryant (substitute secretary)

IN MEMORIAM:

MALCOLM ROSE

1948-2022

Malcolm Rose, an important figure in the early music world, exceptionally skilled harpsichord and historic string maker, a great source of knowledge, and a friend to many in the AMIS community died on December 29, 2022.

A 1969 graduate of Trinity College of Music, London, Malcolm began his career as a music teacher. In 1972 he began working with the John Feldberg Workshop, harpsichord makers, before setting up his own workshop in Mayfield, Sussex in 1975, where he undertook harpsichord maintenance. One year later he continued his studies, this time branching out into the world of historic wires, with the metallurgist Derek Slater.

Malcolm began producing harpsichords in 1977, firstly making instruments based on the Henri Hemsch double manual harpsichord c.1736 in the Boston Museum of Fine Arts. Throughout his career he built instruments based on many makers, including, but not limited to, Joannes de Perticis, Guarracino, Nicolas Dufour, and Pierre Donzelague. In addition to harpsichord building, Malcolm was worked in conservation and restoration, working on instruments by John Wilbrook 1730, Benjamin Slade c.1700, Trasuntinus, Guarracino 1678, Luigi Baillon 1755, Thomas Barton 1709, and Hitchcock and Harris.

After a five-year period of testing historic wire samples with Derek Slater, he started producing music wire in 1981. His research and leadership in the field resulted in the book *A Handbook of Historical Stringing Practice for Keyboard Instruments* published with David Law in 1991. Since 1990 he was based in Lewes, East Sussex, where he made copies of French, Italian, German, and English harpsichords, virginals and spinets, as well as historic wires, a business now continued by his daughters.

