

Eva Esteve Roldán, John Griffiths, Francisco Rodilla León
(Eds.)

Historical Resonances Resonancias históricas

Space, Senses and Early Music
Espacio, sentidos y música antigua



BRILL | FINK

Cover illustration: Christmas Eve Service. *Les Très Riches Heures du Duc de Berry*, 15th century (Chantilly, Musée Condé, Ms 65, fol. 158).

Bibliographic information published by the Deutsche Nationalbibliothek

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data available online: <http://dnb.d-nb.de>.

All rights reserved. No part of this publication may be reproduced, translated, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission from the publisher.

© 2025 by Brill Fink, Wollmarktstraße 115, 33098 Paderborn, Germany, an imprint of the Brill-Group (Koninklijke Brill BV, Leiden, The Netherlands; Brill USA Inc., Boston MA, USA; Brill Asia Pte Ltd, Singapore; Brill Deutschland GmbH, Paderborn, Germany; Brill Österreich GmbH, Vienna, Austria). Koninklijke Brill BV incorporates the imprints Brill, Brill Nijhoff, Brill Schöningh, Brill Fink, Brill mentis, Brill Wageningen Academic, Vandenhoeck & Ruprecht, Böhlau and V&R unipress.

www.brill.com
info@fink.de

Cover design: Evelyn Ziegler, Munich
Production: Brill Deutschland GmbH, Paderborn

ISSN 2751-5249
ISBN 978-3-7705-6913-7 (hardback)
ISBN 978-3-8467-6913-3 (e-book)

In memoriam Dorothea Baumann (1946–2022)

The chapters submitted for publication in this book were subject to peer-review coordinated by Editorial Board:

Los capítulos incluidos en este libro estuvieron sujetos a una revisión por pares realizada por:

Joanne Allen (American University)

Lidia Álvarez Morales (Universitat de Barcelona)

Braxton Boren (American University)

Jonathan Glixon (University of Kentucky)

Deborah Howard (University of Cambridge)

M^a José de la Torre Molina (Universidad de Málaga)

Cristina Urchueguía (Universität Bern)

Jean-Christophe Valière (Université de Poitiers)

Tobias Weissmann (Johannes Gutenberg-Universität Mainz)

Contents/Sumario

List of Figures	XI
List of Tables	XVII
Abbreviations	XIX
The Awareness of Space in the Experience of Listening. An Introduction	XXI
<i>Eva Esteve Roldán, John Griffiths, Francisco Rodilla León</i>	
La consciencia del espacio en la experiencia de la escucha. Una introducción	XXXIII
<i>Eva Esteve Roldán, John Griffiths, Francisco Rodilla León</i>	
PART I	
<i>Music, Architecture and Acoustics / Música, arquitectura y acústica</i>	
1. Architectural Acoustics and the Performance Practice of Early Music	3
<i>Dorothea Baumann</i>	
2. Music, Architecture, Liturgy and Ritual: Ducal Chapels in Sixteenth-Century Mantua and Venice	25
<i>Iain Fenlon</i>	
3. Influence of Architecture on Music (1450–1610): Hispanic Testimonies	55
<i>Eva Esteve Roldán</i>	
4. On Earth as It Is in Heaven. Sound and Architecture in Late Medieval Burgundian Entries	83
<i>Margret Scharrer</i>	

PART II

Acoustic Measurements and Virtual Realities / Mediciones acústicas y realidades virtuales

5. **The Sound of the Hispanic Rite Spaces** 105
Antonio Pedrero González, María Larrosa Navarro
6. **Virtual Acoustic Reconstruction of Notre Dame Cathedral's Choral Past** 129
Valérie Nunes-Le Page, Sarabeth S. Mullins, Brian FG Katz, Frédéric Billiet
7. **Interpretation of a Medieval Vocal Repertoire in the Reconstructed Acoustics of the Great Chapel of the Palais des Papes** 151
Julien Ferrando, Julien De Muynke
8. **Acoustical Study of the Monasterio de San Lorenzo del Escorial Basilica in Relation to its Liturgical Uses** 177
María Larrosa Navarro

PART III

Place, Environment and Musical Experience / Lugares, entornos y experiencia musical

9. **Soloists, Spaces and Performance in Sixteenth-Century Spain** 207
John Griffiths
10. **Música aérea: torres y tribunas para ministriles** 227
Clara Bejarano Pellicer
11. **El coro del Monasterio de San Lorenzo del Escorial. Pensamiento, regulación, soportes de la música, actores, mantenimiento** 241
José Sierra Pérez

12.	La música en la Basílica Arciprestal Santa María la Mayor de Morella: espacios, documentos y fuentes musicales en el contexto medieval y renacentista	271
	<i>Elena Aguilar Gasulla</i>	
13.	Look at All the Glory! Representation of Sound and Scenery at the Imperial Circumcision Festival of 1582	293
	<i>A. Tül Demirbaş</i>	
	List of Contributors	317

List of Figures

1 Architectural Acoustics and the Performance Practice of Early Music

Fig. 1.1. Greek theater: direct sound and reflected wavefronts from the orchestra floor and the back wall.

Fig. 1.2. (a) City of Arles in the Middle Ages built into the Roman amphitheatre. Woodcut engraving after a drawing by Jean Baptiste Guibert (French, 18th century), published in 1864. **(b)** The modern view from the same angle.

Fig. 1.3. King Offa and the architect behind with square and compass. PARIS, n.d.: 60r.

Fig. 1.4. *Schema huius praemissae divisionis sphaerarum*. APPIAN, 1524 after Sacrobosco, ca. 1230.

Fig. 1.5. *Mappa Mundi* of BEDE, ca. 1055–74: 23r.

Fig. 1.6. Psalm 150. *Utrecht Psalter*, 820–35: 83r.

Fig. 1.7. Emperor Michael A'Rangabe crowns Leo V the Armenian as co-emperor. SCYLITZES, 1126–50: 10v.

Fig. 1.8. Ravenna, S. Apollinare in Classe (2nd quarter of the 6th century).

Fig. 1.9. Central nave of Santiago de Compostela Cathedral and reflections off Romanesque vaults after BAER-LOY, 1984.

Fig. 1.10. Cathedral of Toledo, begun in 1227, and reflections off Gothic vaults after BAER-LOY, 1984.

Fig. 1.11. Drawing of the inside of Saint Peter's Basilica (SHEA, 1877: 263).

Fig. 1.12. Christmas Eve Service. Sound sources are near the altar, the organ is near a vault in an excellent acoustic position. *Les Très Riches Heures du Duc de Berry*, 1485–89: 158r. Diagram after BAER-LOY, 1984.

2 Music, Architecture, Liturgy and Ritual: Ducal Chapels in Sixteenth-Century Mantua and Venice

Fig. 2.1. Mantua, Palatine Basilica of Santa Barbara, interior.

Fig. 2.2. Mantua, Palatine Basilica of Santa Barbara, ground plan.

Fig. 2.3. Domenico Brusasorci, Martyrdom of Santa Barbara.

Fig. 2.4. Lorenzo Costa the Younger, Martyrdom of S. Adriano.

Fig. 2.5. Venice. Basilica of San Marco, ground plan.

Fig. 2.6. Church of the Redentore, ground plan.

Fig. 2.7. Church of the Redentore, interior.

Fig. 2.8. Giacomo Franco, Andata to S. Giorgio Maggiore on Christmas Day, engraving.

Fig. 2.9. Venice, Church of San Giorgio Maggiore, ground plan.

Fig. 2.10. Venice, Church of San Giorgio Maggiore, interior.

3 Influence of Architecture on Music (1450–1610): Hispanic Testimonies

Fig. 3.1. Milan Cathedral in CAESERIANO, 1521: 15v.

- Fig. 3.2.** Resonant vessels in VELASCO, 1554–1564: 80v.
Fig. 3.3. Allegory of human and angelic voices in PRIETO, 1622: 391.
Fig. 3.4. Processional detail in NUNYES, 1526–1529.
Fig. 3.5. Processional detail in PRIETO, 1622: 507.
Fig. 3.6. Toledo Cathedral, Saint Christopher and the Emperor's organ (photo by the author).
Fig. 3.7. Route for the end of major processions (1531). Designed by the author in the ground plan of Toledo Cathedral, 1604. ACT, Colección de diseños, 198.

4 *On Earth as It Is in Heaven. Sound and Architecture in Late Medieval Burgundian Entries*

- Fig. 4.1.** Aragonese cannons firing and trumpet, tympanum, and pipe playing. (a) DU PUYS, 1515a: 25v. (b) DU PUYS, 1515b n.p.
Fig. 4.2. Trumpet playing on the roof above the living picture "Emperor Heraclius returning the True Cross to Jerusalem". (a) DU PUYS, 1515a: 16r. (b) DU PUYS, 1515b: n.p.

5 The Sound of the Hispanic Rite Spaces

- Fig. 5.1.** Work methodology.
Fig. 5.2. Floor plans of the selected churches in their current state.
Fig. 5.3. Comparison between measured (m) and simulated (s) values at the church of Santa María de Melque, after the model was calibrated. The vertical segments represent the interval ± 1 JND.
Fig. 5.4. Anechoic recordings equipment.
Fig. 5.5. Values of the reverberation time T_{30} of the selected churches, in the current and original states.
Fig. 5.6. Spatial distribution of the reverberation (EDT at 1KHz) in the churches in their original state. The rectangle with dotted lines delimits the area that would be expected to be occupied by the clergy.
Fig. 5.7. Spatial distribution of speech intelligibility (STI) in the churches in their original state. The rectangle with dotted lines delimits the area that would be expected to be occupied by the clergy.

6 Virtual Acoustic Reconstruction of Notre Dame Cathedral's Choral Past

- Fig. 6.1.** *Viderunt omnes*, first of three versions of organum duplum copied in the *Magnus liber organi*; the tenor part on the lower staff and the organal voice on the upper staff.
Fig. 6.2. *Viderunt omnes* (Perotin); the three organal voices superimposed on the tenor part with the syllables *Vi-de-runt*. I-Fl, Pluteus 29.1, fol. 1.
Fig. 6.3. Ambitus of the voices of the three versions of *Viderunt*, I-Fl MS Pluteus 29.1.

- Fig. 6.4.** Average voice distribution in the four-part organum *Viderunt*, I-FI MS Pluteus 29.1, fol. 1–4.
- Fig. 6.5.** Clerics during a service: monks in the stalls, singers at the lectern in the middle of the choir, priest, and altar servers near the altar. GB-Lbl, Add. Ms. 25698, fol. 2.
- Fig. 6.6.** Three singers (one open mouth) around the lectern, with other clerics holding books. No description of the building, the lectern is close to the altar where a chalice is placed.
- Fig. 6.7.** Site plan of Notre Dame and its predecessors, after Busson.
- Fig. 6.8.** Construction timeline of the cathedral.
- Fig. 6.9.** Center time calculated for the cathedral in ca. 1163, ca. 1198, and ca. 1220.
- Fig. 6.10.** Comparative reverberation times of the pre-Gothic structure, the reconstructed acoustics of the Notre Dame in ca. 1182, ca. 1220, and measurements of the acoustics in 2015.
- Fig. 6.11.** ‘Rue des Chantres’ ensemble, in the anechoic chamber, Jussieu, Sorbonne University.
- Fig. 6.12.** Spectral content of the Tenor, Contratenor, Altus, and Superius voices while singing *Viderunt Omnes*. Peaks indicate frequently recurring frequencies in each singer’s individual performance and include fundamental frequencies as well as the upper harmonics.

7 Interpretation of a Medieval Vocal Repertoire in the Reconstructed Acoustics of the Great Chapel of the *Palais des Papes*

- Fig. 7.1.** The *Palais des Papes* of Avignon, drawing, work of Joseph Rosier based on *Dictionnaire raisonné de l’architecture* by E. Viollet-le-Duc (MACGIBBON, 2018: 143).
- Fig. 7.2.** Partial reconstructed view of the choir of the Great Chapel with the furniture and tapestries from the 14th century, in non-natural colours (*Histopad/Palais des Papes*).
- Fig. 7.3.** Images of the Great Chapel in the modern-day state (left: picture of the acoustic measurements) and medieval state (right: visual model taken from *Histoverly – Histopad/Palais des Papes*).
- Fig. 7.4.** GA model of the Great Chapel in its modern (top) and medieval (bottom) states, where different colours depict different materials. The white blocks represent the audience congregated in the nave.
- Fig. 7.5.** Estimated T_{20} (reverberation time) across different frequency bands, calculated by averaging measurements from sixteen evenly spaced positions within the Great Chapel. The graph displays the T_{20} values for the modern, unoccupied state, with measured values represented by the dashed line (---) and modelled values depicted by the solid line (—).

- Fig. 7.6.** Angels in a semicircular arrangement (left) and singers positioned in a staggered formation (right). Frescoes by Matteo Giovanetti in the chapel of Saint-Martial (photos by the authors).
- Fig. 7.7.** Bird's-eye view of the medieval state model. It illustrates the positions of singers (smaller red dots), conductor (larger blue dots), and lectern (brown rectangles). The image highlights two specific Position/Arrangement combinations: off-axis/arc (top) and on-axis/staggered (bottom).
- Fig. 7.8.** Picture of the singers from *Diabolus in Musica* during the singing experiment, in arc *arrangement*, in the anechoic room of the PRISM laboratory. Each singer wears a proximity microphone, a pair of open-back headphones and motion capture markers (picture by the authors).
- Fig. 7.9.** Block diagram of the auralisation system and recording of the dry signals. \otimes represents the convolution operation. The conductor block is not shown.

8 Acoustical Study of the *Monasterio de San Lorenzo del Escorial* Basilica in Relation to its Liturgical Uses

- Fig. 8.1.** Interior of the basilica (altar and nave) of the Monasterio de San Lorenzo del Escorial.
- Fig. 8.2.** Choir of the basilica of the Monasterio de San Lorenzo del Escorial.
- Fig. 8.3.** Subchoir of the basilica of the Monasterio de San Lorenzo del Escorial.
- Fig. 8.4.** Reverberation time results when the sound source is in the choir.
- Fig. 8.5.** Early decay time values when the sound source is in the choir.
- Fig. 8.6.** C_{80} results when the sound source is in the choir.
- Fig. 8.7.** Reverberation time results when the sound source is in the altar.
- Fig. 8.8.** Early decay time values when the sound source is in the altar.
- Fig. 8.9.** C_{80} results when the sound source is in the altar.
- Fig. 8.10.** Reverberation time and EDT when the sound source is in the subchoir.
- Fig. 8.11.** C_{80} results when the sound source is in the subchoir.

9 Soloists, Spaces and Performance in Sixteenth-Century Spain

- Fig. 9.1.** The sword of Damocles. OROZCO Y COVARRUBIAS, 1589: 67.
- Fig. 9.2.** Coronation of the Virgin, by Andrés López and Antonio de Vega, Iglesia de la Santísima Trinidad, Segovia. Photo courtesy of Cristina Bordas.
- Fig. 9.3.** *Libro en el qual se contienen cinquenta romances*, c.1525, Title page.

10 Música aérea: torres y tribunas para ministriles

- Fig. 10.1.** Casa de las Chirimías, Paseo del Padre Manjón, 16, antiguo Paseo de los Tristes, Albaicín, Granada.

11 El coro del Monasterio de San Lorenzo del Escorial. Pensamiento, regulación, soportes de la música, actores, mantenimiento

Fig. 11.1. Facistol y órgano del coro del Monasterio del Escorial (Foto de Pablo Quesada).

Fig. 11.2. Vista cenital del coro del Monasterio del Escorial (Foto de Pablo Quesada).

Fig. 11.3. Vista frontal del coro del Monasterio del Escorial (Foto de Pablo Quesada).

Fig. 11.4. Interior coral con el rey Fernando VII a la derecha (BRAMBILA, 1832: n° 8).

12 La música en la Basílica Arciprestal Santa María la Mayor de Morella: espacios, documentos y fuentes musicales en el contexto medieval y renacentista.

Fig. 12.1. Escalera y coro de la Basílica Arciprestal Santa María La Mayor de Morella en *Comunitat Valenciana*.

13 Look at All the Glory! Representation of Sound and Scenery at the Imperial Circumcision Festival of 1582

Fig. 13.1. Mountain model illustrated by Nakkaş Osman from [INTIZÂMÎ], 1588: 58v.–59r.

Fig. 13.2. Mountain model illustrated by Nakkas Osman from Seyyid Lokman, 1597: vol. II, ff. 72v–73.

List of Tables

5 The Sound of the Hispanic Rite Spaces

Table 5.1. Relevant parameters of the selected churches.

7 Interpretation of a Medieval Vocal Repertoire in the Reconstructed Acoustics of the Great Chapel of the *Palais des Papes*

Table 7.1. Absorption and scattering coefficients of the materials used in the calibrated model, as a function of frequency bands.

8 Acoustical Study of the Monasterio de San Lorenzo del Escorial Basilica in Relation to its Liturgical Uses

Table 8.1. Meaning of STI values.

Table 8.2. STI results when the sound source is in the choir.

Table 8.3. Global sound strength results when the source is in the choir.

Table 8.4. STI results when the sound source is in the altar.

Table 8.5. Global sound strength results when the source is in the altar.

Table 8.6. Summary of acoustic global parameters.

9 Soloists, Spaces and Performance in Sixteenth-Century Spain

Table 9.1. The musical genres of the music in the published vihuela books.

Abbreviations

Polyphonic sources are cited according to Répertoire International des Sources Musicales (RISM). The other abbreviations used are:

Las fuentes polifónicas se citan según el *Répertoire International des Sources Musicales* (RISM). Las demás abreviaturas utilizadas son:

ACT: Archivo de la Catedral Primada de Toledo

ADM: Archivio Diocesano, Mantova

AHEM: Archivo Histórico Eclesiástico de Morella

AHPdS: Archivo Histórico Provincial de Sevilla

AMS: Archivo Municipal de Sevilla

ASM: Archivio di Stato, Mantova

ASMo: Archivio di Stato di Modena

ASV: Archivio di Stato, Venezia

APR: Archivo General del Palacio Real, Madrid

BAV: Biblioteca Apostolica Vaticana, Vatican City

BNF: Bibliothèque Nationale de France, Paris

BPR: Biblioteca del Palacio Real de Madrid

CMC: Chantilly, Musée Condé

DMEH: Casares, Emilio *et al.* (eds.): *Diccionario de la música española e hispanoamericana*, Madrid: SGAE, 1999–2002, 10 vols.

fol./fols.: folio/folios

GroveMO: *Grove Music Online*, <<https://www.oxfordmusiconline.com/grovemusic>>

MGG: *Die Musik in Geschichte und Gegenwart*, <<https://www.mgg-online.com/>>

ML: Musée du Louvre, Paris

n.p.: no pagination

n.d.: no date

ÖNB: Österreichische Nationalbibliothek, Wien

p./pp: page, página/pages, páginas

RAH: Real Academia de la Historia, Madrid

s.f. sin fecha

s.i. sin imprenta

s.l.: sin lugar

SK: Süleymaniye Kütüphanesi, Istanbul

T SMA: Topkapı Sarayı Müzesi Arşivi, Istanbul

vol.: volumen

Influence of Architecture on Music (1450–1610): Hispanic Testimonies

Eva Esteve Roldán

Introduction

The term Renaissance, first coined by Jules Michelet in 1855¹, has traditionally been used to underline the revitalisation of classical culture during the fifteenth and sixteenth centuries. The vestiges of Greek treatises in musical theory and some characteristic compositional demands of the time have usually been related to the Greco-Roman precepts of balance, symmetry, rhetoric, etc. However, the increasing attention in these centuries to acoustics², which originates from the spread of architectural ideas transmitted from Antiquity, is a theme scarcely treated in comparison with the number of studies focused on repertoires, their analysis, theoretical treatises and the role of music and musicians within institutions or society³.

Murray Schafer's proposals in the 1970s and Tilman Seebass' denunciation of the scant attention to contextual sources has given rise to a series of musicological studies that often include the terms "soundscape" and "urban spaces" and focus on the location of the musicians in specific places, but in most cases, they do not take into account the auditory perception or the direct influence of the topography on the praxis⁴. This chapter focuses specifically on these aspects forgotten by current trends in geo-referencing, connects them with treatises of architecture, and shows their reflection in Renaissance musical performance. To achieve this objective, the classical writings concerning buildings and their influence on the Iberian Peninsula are first analysed, before pointing out some Hispanic Renaissance testimonies about the experience of sound in relation to space.

* I thank the article reviewers for their helpful advice and suggestions.

1 MICHELET, 1855.

2 The term is used in this chapter with a similar meaning to the Greek word *akousticos*, in a broad sense of everything related to sound and its behaviour, not in the sense of the scientific study of the behaviour of sound waves in different spaces, which was clearly established in the nineteenth century.

3 A pioneering monograph on this topic is HOWARD and MORETTI, 2009.

4 SCHAFFER, 1969; SCHAFFER, 1973–8; SEEBASS, 2001.

The Study of Treatises and Their Influence

Marcus Vitruvius Pollio, an engineer and soldier in Gaul under the army of Julius Caesar, is the author of the oldest surviving study of buildings from Classical Antiquity. His work *De architectura*, written in ten books between the years 27 to 15 BCE., served as the basis for later technical manuals such as that of Pliny the Elder and other later texts, Sextus Julius Frontinus, Cetus Faventinus, Gargilius Martialis or Rutilius Taurus Emilianus (Palladius). During the Middle Ages, Vitruvius's treatise continued to be disseminated in handwritten copies. Its distribution underwent a renewal from the Carolingian Renaissance, where the text of the lost Codex Archetypus was reproduced, copies of which are kept in cities relatively close to Lake Constance belonging to present-day Germany, Switzerland and France. Various thirteenth and fourteenth-century scholars commented on the manual's contents, including Saint Albert the Great, Saint Thomas Aquinas, Vincent of Beauvais, Francesco Petrarca, Giovanni Boccaccio, Nicola Accianoli, and Domenico di Bandino⁵. With the revival of classical culture, reproductions of the Vitruvian text gained renewed momentum. In 1440, the Lombard humanist Pier Candido Decembrio sent a manuscript copy of the volume on architecture from Florence to the Duke of Gloucester, showing the wide distribution of the treatise even before the invention of the Gutenberg technique of printing. As the fifteenth century progressed, Italian architects incorporated Greco-Latin precepts, both in their literary works and in their buildings⁶. Leon Battista Alberti elaborated a critical reinterpretation of the Vitruvian model following the structure of the ten books in his manual *De re aedificatoria* written between 1443 and 1452. The study of this renaissance humanist and polymath was first printed in 1485 in Florence. The following year, the text of the ancient Roman architect was printed, establishing the fundamental points of reference for Renaissance construction⁷. The numerous copies, revisions, reprints, and translations of Vitruvius's work in the sixteenth century show the general interest in the subject. Some of these editions do not limit themselves to repeating the concepts but apply them to contemporary architecture. This is the case with the first Italian translation by Cesare Cesariano of the text by the Roman engineer and writer, which in 1521 adapted the proportions, circle, symmetry, and classical harmony to contemporary buildings such as Milan Cathedral (Fig. 3.1)⁸.

5 CERVERA VERA, 1978; KRINSKY, 1967: 36–70.

6 CERVERA VERA, 1978.

7 ALBERTI, 1485 and VITRUVIUS, 1486.

8 CAESERIANO, 1521, transl. of Vitruvius, book 1, chapter 2, fol. 15v.

- SCHAFFER, R. Murray. 1973–8. *The Music of the Environment*, Vancouver: Universal Edition.
- 1969. *The New Soundscape*, Ontario: Berandol Muele, 1969.
- SEEBASS, Tilman. 2001: “Iconography. 6. Contextual sources: performance sites”, *GroveMO* [Revised in 2014, accessed 3–3-2023].
- SERLIO, Sebastiano. 1552. *Tercero y quarto libro de Architectura [...] traduzido de toscano en romance castellano por Francisco de Villalpando architecto*, Toledo: Juan de Ayala.
- SIGÜENZA, José de. 2010. *La fundación del Monasterio de El Escorial*, Valencia: CMC Editor.
- TORRES FERNÁNDEZ, Milagros. 2006. *El ceremonial de Granada y Guadix y los espectáculos religiosos en Castilla a finales del Medievo*, Madrid: Fundación Universitaria Española.
- URREA, Miguel de (transl.). 1582. *Marco Vitruvio Polión. De Architectura libri decem*, Alcalá de Henares: Juan Gracián.
- VALIÈRE, Jean-Christophe; PALAZZO-BERTHOLON, Bénédicte; POLACK, Jean-Dominique and CARVALHO, Pauline. 2013. “Acoustic Pots in Ancient and Medieval buildings: Literary analysis of ancient texts and comparison with recent observations in French churches”, *Acta Acustica united with Acustica*, vol. 99.1, pp. 70–81.
- VELASCO, Lázaro de (transl.) 1554–1564. *Los diez libros de arquitectura de Marco Vitruvio romano traduzido en castellano por un matemático*, (manuscript), Cáceres, Biblioteca Pública del Estado, Mss/2.
- VITRUVIUS, Marcus. 1486. *De Architectura libri decem*, Roma: Heroldt.
- WILKINSON, Alexander S. 2020. *Iberian Books: Books Published in Spanish or Portuguese or on the Iberian Peninsula before 1601*, Leiden: Brill.

List of Contributors

Elena Aguilar Gasulla

Universidad Politécnica de Valencia

Conservatorio Superior de música de Castellón de La Plana

ORCID: 0000-0002-9429-3515

Dorothea Baumann

University of Zurich

Clara Bejarano Pellicer

Universidad de Sevilla

ORCID: 0000-0003-0389-5164

Frédéric Billiet

Sorbonne Université

ORCID: 0000-0001-6939-4739

A. Tül Demirbaş

University of Bern

ORCID: 0000-0003-1444-7244

Julien De Muynke

Sorbonne Université, CNRS, Eurecat

Centre Tecnològic de Catalunya

ORCID: 0000-0002-0373-4697

Eva Esteve Roldán

Universidad Internacional de La Rioja

ORCID: 0000-0001-9946-710X

Iain Fenlon

University of Cambridge

Julien Ferrando

Aix Marseille Univ, CNRS, IDEAS, Marseille

ORCID: 0000-0002-7031-8677

John Griffiths

University of Melbourne

ORCID: 0000-0002-9865-7937

Brian FG Katz

CNRS, Sorbonne Université

ORCID: 0000-0001-5118-0943

María Larrosa Navarro

Universidad Politécnica de Madrid

ORCID: 0000-0002-3591-0640

Sarabeth S. Mullins

CNRS, Sorbonne Université

ORCID: 0009-0001-9723-3403

Valérie Nunes-Le Page

IReMus, Sorbonne Université

ORCID: 0000-0003-2359-3702

Antonio Pedrero González

Universidad Politécnica de Madrid

ORCID: 0000-0001-9969-6308

Margret Scharrer

University of Bern

ORCID: 0000-0002-7687-2548

José Sierra Pérez

Real Conservatorio Superior de Música de Madrid