

Madrid, May 2025

Premiere of the 18th-Century Opera that Trained Artificial Intelligence within the REPERTORIUM Project

The revival of *Didone abbandonata*, a landmark of Spain's 18th-century musical heritage, also marks a technological breakthrough in the field of cultural preservation.

On 11 May 2025, the Auditorio Nacional de Música in Madrid will host the modern premiere of *Didone abbandonata*, an opera composed in 1752 by Baldassare Galuppi to a libretto by Metastasio, commissioned by the Spanish court to celebrate the birthday of King Ferdinand VI. The event, part of the Universo Barroco series organised by Spain's Centro Nacional de Difusión Musical (CNDM), will bring back to the stage a cornerstone of European musical history that had remained largely inaccessible for centuries. The production will later travel to Germany, where it will close the Early Music Festival in Potsdam on 28 June 2025.

But this premiere also represents a technological milestone: within the framework of the European project REPERTORIUM, the manuscript score of *Didone abbandonata* was used to successfully train the most advanced, versatile, and accurate artificial intelligence system developed to date for the transcription of handwritten orchestral music.

A New Role for Artificial Intelligence in Cultural Heritage

The REPERTORIUM project, funded by the European Union through the Horizon Europe programme, brings together a consortium of leading institutions committed to applying AI technologies to European musical heritage. Among them, the Instituto Complutense de Ciencias Musicales (ICCMU) has played a key role in the transcription and critical edition processes. Thanks also to the work of researchers Jorge Calvo-Zaragoza and David Rizo (University of Alicante), an AI system combining optical music recognition (OMR), machine learning, and graphological analysis was trained using *Didone abbandonata*'s complex and detailed manuscript.

This artificial intelligence, after processing over 10,000 pages of historical scores and continuously improving through human-supervised corrections, is now capable of deciphering, reconstructing, and critically editing 18th-century orchestral manuscripts. Its success opens the door to recovering and disseminating numerous forgotten works, democratizing access to a once-hidden repertoire.

From the Archive to the Stage

The manuscripts of *Didone abbandonata* are preserved in the Library of the Ajuda Palace in Lisbon and the Royal Conservatory of Brussels. The critical edition resulting from the REPERTORIUM

project allows the music to be performed once again, after centuries during which it was confined to archival shelves.

The opera will be presented in concert version, performed by the Nereydas orchestra under the direction of Ulises Illán, and featuring an international cast of specialists in historical performance practices.

Reviving the Sound of 18th-Century Europe

Didone abbandonata is not just any opera: it is a key work that placed Spain at the heart of European music in the mid-18th century, showcasing the artistic ambitions of the Spanish court. Its revival not only reconnects audiences with a brilliant moment in history but also symbolizes a new era where artificial intelligence becomes an essential tool for cultural preservation.

This pioneering collaboration between researchers, technologists, and musicians underlines that innovation and tradition can go hand in hand. Thanks to REPERTORIUM, *Didone abbandonata* will resonate again, and many other forgotten masterpieces may soon follow.

Europe's sound memory is being reborn — with 21st-century technology leading the way.

ANNEXE

Baldassare Galuppi and *Didone*

Baldassare Galuppi was integral to the development of opera seria and served as a bridge between the Baroque aesthetic and the Classical period. Although his name may not appear frequently in the programmes of today's opera houses, in the 18th century he was revered throughout Europe. His operas were performed continuously for more than 60 years in the continent's leading theatres, both public and at court, from his country of origin, Italy, to Russia, Germany, England and Spain.

Galuppi, like many in the society of his time, was fascinated by the story of Dido and Aeneas. He set Pietro Metastasio's celebrated libretto on this theme to music on three occasions: in 1741 for the Teatro Monza in Modena; in 1752 for the Teatro del Buen Retiro in Madrid; and finally, in 1764 for the Teatro San Benedetto in Venice. Although for a time it was thought that the 1752 version was simply a revision of the first Italian version, this restoration has shown that both the libretto and the music present very notable differences, which make the 1752 score a new version in its own right: a new opera.

A production adapted to the tastes of the Spanish court

The version that will be premiered on 11 May 2025 is an exceptional one: it was commissioned from Galuppi by the Spanish court to celebrate the birthday of King Ferdinand VI on 23 September 1752. The court enjoyed the collaboration of Metastasio himself, who revised for the occasion the libretto of *Didone abbandonata* he had written in 1724.

Carlo Broschi 'Farinelli' (his stage name) coordinated all the details of the production: the gestation process between librettist and composer, as well as the staging by Antonio Jolli and the scenographic design by Francesco Battaglioli. The court spared no expense, and the production featured some of the best singers of the time, such as Teresa Castellini, who years later originated the lead role in

Nitteti, an opera by Nicola Conforto also with a libretto that Metastasio wrote specifically for Madrid. In addition, the same cast of *Didone* would premiere Conforto's *Il Siroe* the following year.

Farinelli's influence extended to revisions and improvements to adapt the opera to the tastes of the court of Madrid. In fact, at Farinelli's initiative, Metastasio incorporated a *licenza* or celebratory final scene starring Neptune, with the purpose of attenuating the tragic denouement of the opera, which until that moment concluded with the suicide of Queen Dido. In this way, the protocol of homage to the music-loving monarch was fulfilled.

Farinelli fiercely defended Galuppi's work during his stay at the Spanish court; in fact, Galuppi's music was already being performed in Spanish theatres before 1752. Two years earlier, he had written, together with Giovanni Battista Mele, a version of *Demofonte*, also with a libretto by Metastasio. The Spanish *Didone* was revived at least seven times in the following three years, always in the same theatre and with several performances on each occasion, achieving great success.

A story of female empowerment

Nicknamed 'Il Buranello' after his birthplace on the island of Burano (Venice), Galuppi managed to capture characters with great depth and nuance in his music, without renouncing his unmistakable melodic clarity. In the case of *Didone*, in its 1752 version, he portrays the vulnerability of the protagonist in a timeless and deeply moving way. Through his music, one perceives the duality between the queen and the lover, between the powerful woman and the wounded lover. For example, the fierceness of the aria 'Son regina e sono amante', in which the protagonist asserts herself in the first act as an independent and empowered monarch, contrasts with 'Ah, non lasciarmi, no' in the middle of the opera, where we see a self-absorbed and pleading woman.

Dido's story – of love, betrayal and resilience – is universal, and her feminine power is still relevant today. The opera tells the story of Queen Dido (the protagonist of the opera), founder of Carthage, who falls in love with Aeneas, the surviving hero of the Trojan conquest (the protagonist of the Aeneid). However, Aeneas responds to the call of the gods to found a new city (Rome) and abandons Dido, who spends much of the opera torn between her feelings and the duty to rule.

Manuscripts and technology, artificial and human intelligence

The original manuscript of the version of *Didone* that has been used as the main source for this historical recovery is currently kept in the Library of the Ajuda Palace in Lisbon, Portugal. Although the cover does not specify its origin, we know that it is the version composed for the Spanish court because it coincides with Metastasio's libretto published for the 1752 performances in Madrid, and because it differs from the music preserved for the other two versions by Galuppi. In addition, it has been possible to compare it with another partial source preserved in the Library of the Royal Conservatory of Brussels. Artificial intelligence experiments to attribute authorship have confirmed the hand of Galuppi.

A top-level scientific and artistic team has been brought together for the edition of the score to be performed at the Auditorio Nacional. The arias from the opera that were digitised and analysed as part of a corpus of 3,000 18th-century opera arias by the Instituto Complutense de Ciencias Musicales within the framework of the *DIDONE* project have been used. The *DIDONE, The Sources of Absolute Music: Tracing Emotions in Eighteenth-Century Italian Opera* has been funded by an Advanced Grant from the European Research Council and its results are available at arias.didone.eu. The editorial team of the Instituto Complutense de Ciencias Musicales has completed the score by copying and editing the recitatives and purely instrumental pieces of the opera.

The score has been revised and corrected by the editors Ana Llorens and Álvaro Torrente, who have sought to guarantee fidelity to the manuscript sources of the work. The editorial team of the Instituto Complutense de Ciencias Musicales (ICCMU) has prepared the materials for performance in concert by the Nereydas orchestra, which will use iPads to read the music for each instrument. The ICCMU will provide the orchestra with the tablets thanks to the *DEeP Music project: Digitisation of the musical heritage ecosystem*, financed with European funds through the Ministry of Science, Innovation and Universities.

Within the framework of the European programme Repertorium, a pioneer in the use of artificial intelligence in the recovery of musical manuscripts

Fundamental to the recovery of the work has been the REPERTORIUM project: *Researching and Encouraging the Promulgation of European Repertory through Technologies Operating on Records Interrelated Utilising Machines*, funded by the European Union's Horizon programme. Thanks to this project, the publication of this opera has been a unique opportunity to train artificial intelligence models for *Optical Music Recognition* (OMR) with 18th-century musical manuscripts. The automatic transcription of music thanks to OMR has enormous potential as a support for research and as an accelerator of knowledge and the dissemination of Europe's musical heritage. This development has been carried out in collaboration with the team of Jorge Calvo-Zaragoza and David Rizo from the University of Alicante, world specialists in OMR.

Using an innovative combination of artificial intelligence algorithms, machine learning and musicological knowledge, REPERTORIUM digitises ancient and fragile manuscripts; decodes and transcribes the complex musical notation of the 18th century; and restores lost works for contemporary performance.

To date, REPERTORIUM has digitised and processed more than 10,000 pages of historical manuscripts and its AI platform continues to evolve, learning from human corrections to improve accuracy. The success of *Didone abbandonata* lays the foundation for other modern premieres of long-forgotten works. More information about the project: <https://repertorium.eu/>

Artistic credits

Director: Ulises Illán

Performers:

Natalie Pérez, mezzo-soprano (Didone)

Federico Fiorio, sopranista (Enea)

Zachary Wilder, tenor (Iarba, Nettuno)

Filippo Mineccia, countertenor (Osmida)

Roberta Mameli, soprano (Selene)

Natalia Labourdette, soprano (Araspe)

Practical information

Date: Sunday 11 May 2025 / 18:00

Venue: Auditorio Nacional de Música (Sala Sinfónica), **Madrid (SPAIN)**

Ticket sales [here](#)

Date: Saturday 28 June 2025 / 19:00

Venue: Musikfestspiele Potsdam Sanssouci, Great Hall Nikolaissaal **Potsdam (GERMANY)**

Ticket sales [here](#)