



## ISAC – 2024

“Eugenio Giordani”

**Pesaro UNESCO Creative City of Music – ITALY**

**IRCAM Centre Pompidou Paris – FRANCE**

Web Site - <https://isac-pesaro.github.io/>

### 1. PREMISE

After the success of the first edition of ISAC-2023, which resulted in more than 100 compositions by 77 candidates from 26 countries, IRCAM Centre Pompidou and Pesaro UNESCO Creative City of Music are proud to announce their joint collaboration for this new edition of the ISAC-2024 competition.

The simultaneous occurrence of IRCAM's 30<sup>th</sup> Forum Anniversary and of Pesaro's Italian Capital of Culture 2024, opens up the possibility for the winning authors to travel in sequence from Pesaro to Paris in two of the best public facilities for high-order Ambisonics acousmatic listening in the world: **Sonosfera®** and **Espace de Projection**.

The great leap forward that free Ambisonics technology has produced in recent years has allowed the development of an increasing number of artistic creations in various areas of music production. Electronic and mixed music, soundscape art, thematic documentary, audio drama, music recording etc., are all finally embracing spatial audio techniques to shape sound on a spherical domain, where space (position, dimension and perspective of sound sources) becomes a usable compositional element.

Even if sound synthesis/manipulation/post-production software and hardware for these creations are now widely available, it is obviously much rarer to find theatres and structures capable of reproducing these works in HOA spherical periphony, especially for an audience of adequate size.

Sonosfera® in Pesaro fulfills both needs: a technological standard of 6<sup>th</sup> order Ambisonics of the highest sound quality level, and a capacity of 60 seats. Sonosfera® is a mobile technological amphitheater for deep listening of ecosystems and music, designed for Pesaro UNESCO Creative City of Music by David Monacchi, opened to the public in Dec 2019. It is equipped with an array of 45 custom-built loudspeakers positioned isotropically (with the only exception of the *nadir* area) in a self-isolating spherical space with perfect internal acoustics. Sound-transparent circular terraces lift the audience above an acoustically 'active' lower hemisphere, while the upper one is also equipped with a 360° projection screen with horizontal resolution of 24k. Sonosfera® puts listeners at the center of the soundscape, in the darkness of a stimulating acousmatic sensorial experience, sometimes "lighted up" by visual analyses of sound. Sonosfera® was in fact originally designed and built for spherical reconstruction and visualization of HOA field recordings carried out in primary tropical rainforest ecosystems, as part of the scope of the long-term project *Fragments of Extinction*.

Espace de Projection in Paris..... description and characteristics.....

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IRCAM Forum has teamed up with ISAC2024 to create a joint prize, guaranteeing winners access to these two Ambisonics concert halls. The Ambisonics formalism is very powerful and allows a certain independence



between the reproduction system (number and spatial distribution of the loudspeakers) and the encoding / decoding format. That's why it's chosen to provide an optimal experience in different locations. ISAC competition represents a way to sustain creative practices of full-periphonic music and soundscape composition, fostering the diffusion of a culture of acousmatic 3-dimensional listening, an 'old' dream of our electronic music fathers, not really fully explored with the benefit of current software and electroacoustic technologies.

## 2. CALL

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ISAC competition calls for outstanding 3D-audio works created for half-sphere or full-sphere reproduction, for an acousmatic listening experience.

Requested works will have to be presented in 6<sup>th</sup> or 7<sup>th</sup> order Ambisonics format - maximum duration of 10 minutes. (See section 8. for specifics)

Candidates can submit their works exclusively online. The procedure starts by sending an email indicating name, nationality and age of the candidate (team are also accepted) to the following email addresses: [isac.pesaro@gmail.com](mailto:isac.pesaro@gmail.com) and in copy to [ircam-forum@ircam.fr](mailto:ircam-forum@ircam.fr)

A response with a link to a Google Drive private folder (where the candidate can upload all his material) will be sent to his email address. Every candidate can modify his folder until the end of the call including a maximum of 2 different compositions. The Steering Committee will process all submissions in order to eliminate any reference to candidates' (or team's) names and data, and will send to the Guest Jury only the compositions for blinded judgment.

The requested material will have to include:

- 1) PDF file 1 — **Program notes** (with no reference to the name of the candidate) including:
  - Title (and subtitle if applicable)
  - Duration (max 10.00 min.)
  - Short synopsis with any information on poetics and compositional strategies
  - Technical information including original spatialization techniques used
- 2) PDF file 2 — **Name with short bio + extended CV**
- 3) WAV file — 6<sup>th</sup> or 7<sup>th</sup> order Ambisonics ACN-SN3D, 48kHz-24bit (see more specifics on section 8).

## 3. CATEGORIES (ACOUSMATIC – FIXED MEDIA)

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ISAC-2024 edition is set for acousmatic fixed media compositions as a sole macro-category. Although, given the uniqueness of the two concert venues (Sonosfera® and ESPRO) and their capability of reproducing complex acoustic scenes from the real world with the highest spatial definition, the production of 'soundscape composition' is also encouraged.

## 4. AWARDS

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First Prize      € 2500      (+ hotel for 3 days in Pesaro + travel and hotel for x days in Paris)



Second Prize € 1000 (+ hotel for 3 days in Pesaro + travel and hotel for x days in Paris)  
Third Prize € 500 (+ hotel for 3 days in Pesaro + travel and hotel for x days in Paris)

The jury reserves the right to assign also up to n. 2 special mentions.

All awarded compositions and special mentions will be performed in the competition in Sonosfera® in Pesaro. The 3 prizes will also be performed in the final concert in IRCAM's ESPRO in Paris. Winners will have to be present in both venues. A further amount for partially sustaining travel expenses to Pesaro dedicated to possible distant or overseas winners is also being considered.

## 5. JURIES

There will be two different juries. A Steering Committee will pre-select compositions on the base of eligibility, technical feasibility, aesthetics and potential result in Sonosfera® and Espace de Projection. A Guest Jury will select winners from a short list of best suited compositions.

### Sonosfera® Curators:

David Monacchi, Daniele Vimini

### ESPRO, IRCAM Forum Curators:

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### Steering Committee:

Nicola Casetta, Carmine Emanuele Cella, Tommaso Giunti, David Monacchi, Alessandro Petrolati.

### Guest Jury:

Jury created by IRCAM Paris

(the jury composition will be soon communicated)

## 6. TIMING

- From the publication date of the call, there will be 49 days for submission.
- Immediately after the call's deadline, the steering committee will start the examination work and will listen to each and every eligible composition in Sonosfera® for selecting (by two different phases) a final short-list.
- Guest jury will then examine and listen to the short-list works in Espace de Projection, and select the 3 final candidates + 2 mentions, communicating these results on Feb 7<sup>th</sup> 2024.
- Competition concert (at the presence of the president of the Guest Jury and the entire steering committee) and winners' award ceremony will take place in Pesaro on June 15<sup>th</sup> 2024.
- Final concert will take place in Paris on June 22<sup>nd</sup> 2024.

12/09/2023

31/10/2023

07/02/2024

15/03/2024



14 01 2023 <b>CALL START</b>	04 04 2023 <b>CALL END</b>	05 05 2023 <b>RESULT</b>	09 06 2023 <b>AWARD CEREMONY</b>
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CONCERT IN PESARO +

Award ceremony will take place in an institutional venue of Pesaro UNESCO Creative City of Music, with the Mayor of the city, cultural and institutional authorities, members of Juries and general public.

## 7. CONCERTS

Short-listed compositions, special mentions and winners will have the right to be performed in acousmatic concert events in Sonosfera® scheduled for March 15<sup>th</sup>-17<sup>th</sup> 2023. The 3 winners will be performed also in IRCAM's Espace de Projection on March 22<sup>nd</sup>.

The three nominees and mentions will have the possibility to work in the Sonosfera® during the 2 days prior to the competition concert, for optimizing and mixing their works for the specifics of full-sphere space. The same will happen in Paris where the winners will have the opportunity to optimize their awarded compositions in Espro.

Sonosfera® is capable of hosting 60 people per session, thus a number of performances will be scheduled during the day of the awards ceremony and over the week. Espace de Projection will have a broader audience capability but also limited. The final schedule will thus be communicated depending on later organizational considerations and bookings from general public and authorities.

*Note: Sonosfera® is equipped with an RGB 60+8+4 spots lighting system. During preparation of the concert authors may suggest a lighting spectrum that goes from total darkness to any desired color/intensity, arranged by local collaborators.*



## 8. SUBMISSION

### Technical specifications for AUDIO FILES

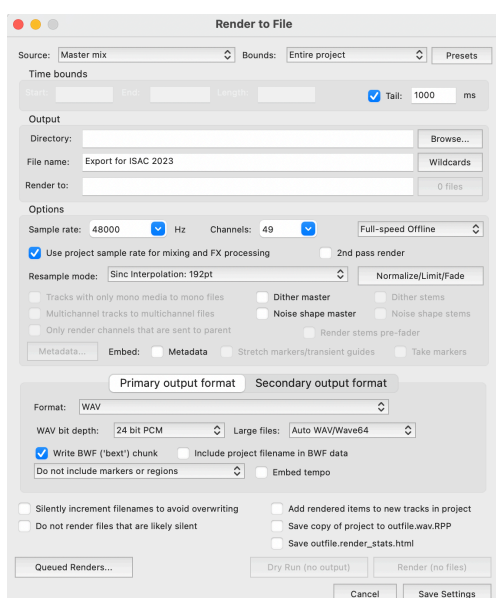
#### A) For selection phase:

Ambisonics compositions are requested in 6<sup>th</sup> or 7<sup>th</sup> order (49 or 64 channels), half-sphere or full-sphere Ambisonics format, with the following characteristics:

- "WAV multichannel" (also known as "Wave64") - single 49-ch. or 64-ch. WAV file
- Sample rate: 48 kHz
- Quantization: 24 bit preferably (16-bit are accepted for selection phase – file size optimization and internet upload ease)
- Channel ordering: ACN (AmbiX)
- Gain normalization: SN3D (AmbiX)

*Note: if 6<sup>th</sup> or 7<sup>th</sup> order Ambisonics file cannot be produced or rendered, 3<sup>th</sup> to 5<sup>th</sup> order Ambisonics format (16-25-36 channels) can also be accepted, but their reproduction will not be ideal in both concert venues.*

*We strongly suggest to compose and process already in 6<sup>th</sup> order ambisonics, monitoring the 3D audio-scene through headphones with free or commercially available Ambisonics binauralizers. Given current HOA microphone technologies limitations, pure field recording-based soundscape compositions will have the limit of 4<sup>th</sup> or 6<sup>th</sup> order Ambisonics. These awarded compositions can be specifically processed for optimization in Sonosfera® or Espro prior to the concert. It is recommended the use of proper 6<sup>th</sup> or 7<sup>th</sup> order Ambisonics tools both for composition, spatial processing and post-production of audio scenes, as for example Ircam's SPAT, Panoramix, IEM tools and Sparta tools. Authors which are not familiar with Ambisonics might be willing to re-encode their multichannel composition in Ambisonics format (virtual speakers) or (better) to re-spatialize them in Ambisonics starting from the original N files or synthetic/concrete sound objects (suggested).*



Example of Reaper Export dialog

#### B) For competition concert in Sonosfera® and Espace de Projection:



# INTERNATIONAL SONOSFERA AMBISONICS COMPETITION

The 3+2 final compositions can be mixed by authors directly from their laptop computer connected to Sonosfera® via Dante protocol, and then rendered for final concert to 6<sup>th</sup> order Ambisonics 48kHz-24bit format. The 3 winners will also have a similar opportunity in IRCAM Espro.