

# Virtual Sound Gallery

Andrey Bundin  
Herzen State Pedagogical  
University of Russia  
Russia, St. Petersburg  
iBundin@gmail.com

## ABSTRACT

Virtual Sound Gallery (VSG) is a web stage for modern multichannel music, sound, and audiovisual art. It is an accessible, web-based virtual reality (VR) environment for a visualized binaural simulation of multichannel sound reproduction. In this environment, a user can change their location among virtual loudspeakers and rotate their head to get the best spatial listening experience. In addition, an integrated video engine provides the ability to play visual content on one or several virtual screens in sync with the audio. VSG provides access to different electroacoustic music compositions presented in several virtual exhibitions and classified by concepts, styles, and organizations.

Technically, VSG is a one-page website developed with modern Java Script, PHP, and MySQL. VSG works on a modern desktop and mobile browsers. It is also compatible with such virtual reality devices as Oculus Rift and Google Cardboard. Further development of the system includes adding algorithmic composition functionality, a sound objects spatialization approach, panoramic video engine, static addresses of works and exhibitions, comments, and personal messages.

## CURRENT EXPOSITION

Currently, VSG presents several virtual exhibitions: “Floating Sound Gallery,” “Spatial Electroacoustics Laboratory,” “Acousmatic Etudes,” and a set of multichannel sonic works created by the author of Virtual Sound Gallery.

“Floating Sound Gallery” presents spatial sound artworks in a specific multichannel environment, that is essentially different from traditional music halls, stereo- or stage-oriented. As a venue devoted to multichannel pieces, it functions on the junction of art gallery, concert hall, and CD label, modifying their genes toward a music salon of experimental sound art. Conceptually initiated in 2008 by Patrick K.-H., Floating Sound Gallery extends art practices that he holds together with a co-curator, Oleg Makarov.

“Spatial Electroacoustics Laboratory” was created in 2013 by Andrey Popovsky and Boris Shershenkov. The project focuses on a creative work with spatial sound and multichannel systems in various directions: multichannel music, spatial acousmatic improvisation, sound field modeling, audiovisual performances. Laboratory is also aimed at the representation of spatial sound landscapes and demonstration of multichannel sound installations.

“Acousmatic etudes” is the collection of spatial fixed media artworks created by the students of the Music Technology class at the Herzen State Pedagogical University of Russia.

## WEB LINKS

Virtual Sound Gallery: <http://virtualsoundgallery.com>

## ACKNOWLEDGMENTS

The author is grateful to the Center for Design and Multimedia at ITMO University for their help in the development of VR headset support functionality, and to Anton Andersen for the optimization of mobile version. Much appreciation also goes to all the composers who contributed their works to the Virtual Sound Gallery.



Licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0). **Attribution:** owner/author(s).

*Web Audio Conference WAC-2016, April 4–6, 2016, Atlanta, USA.*

© 2016 Copyright held by the owner/author(s).