Francesca
Agostinis
Wien (A)

francesca.agostinis@students.mdw.ac.at

Body Mind Music

Spotlight Poster

# Emotional perception of a guitar concert: 3D Immersive virtual reality versus typical 2D video streaming of a guitar concert

**Francesca Agostinis, Matthias Bertsch**

In today's music scene, the audience has the opportunity to experience a musical performance in different forms, for example: "live" in a concert hall or music club, through various streaming platforms, such as YouTube, Spotify or AppleMusic, or again in a virtual reality (VR) environment.

The latter has become very widespread in recent years, thanks to technological developments as well as, perhaps, the pandemic of COVID-19, and so a new avenue for music performance has opened for musicians and their audience.
One day I was listening to a live streamed music competition final at home with my laptop and at the same time, I was able to discuss the performances with a colleague who was in the hall: for her, it was clear that one performance was more emotional than the others, oppositely it was quite flat and unmoving for me. Of course, everyone has their own personal taste, but I then asked myself: What emotional differences can arise in the audience's experience in the different performance situations?

From this question I developed an experiment to compare the audience's emotional reactions during two listening situations. These were a "typical video streaming" situation with laptop and headphones, and an "immersive virtual reality" with the use of VR glasses, which were provided by the Österreichische Gesellschaft für Musik und Medizin, which I thank for this financial support.

Based on the concert situations and the participants' data, three main hypothesis were postulated:

1) participants in the immersive VR will have more SCRs.
2) participants who play the guitar will have more SCRs.
3) the level of musical education will be reflected in the amount of SCRs.

The experiment consisted of monitoring the skin conductance response (SCR) of 29 participants while they watched a live recorded guitar concert in the two different concert situations. The SCR was measured with the "eSense" sensors from the company "Mindfield".

The results show that the first hypothesis "participants in the immersive VR will have more SCRs" was confirmed, while the other two "participants who play the guitar will have more SCRs" and "participants who play the guitar will have more SCRs" were confirmed

Francesca Agostinis is an Italian guitarist who lives and teaches in Austria. From 2015 to 2020 she completed the bachelor's degree programme "Konzertfach" and the bachelor's degree programme "Instrumental (Vocal) Pedagogy (IGP)" at the University of Music and Performing Arts Graz (KUG). In 2024 Francesca Agostinis obtained her master's degree with distinction in "Instrumental (Vocal) Pedagogy (IGP)" from the University of Music and Performing Arts Vienna (MDW), where she could deepen her knowledge and interest in the field of "Music Performance Science".

Parallel to her studies, she is also fully occupied in her professional life: She worked from 2019 'till 2021 at the Institute for Music Education at the University of Music and Performing Arts Graz (KUG) as student assistant as well as project assistant, and since September 2021 she has been employed as guitar teacher at the "Johannes Brahms" music school in Mürzzuschlag.