

## **DUO SPECTRALIS for Viola, Tárogáto & live-electronics in 5.1 surround sound (MAX)**

**Composer:** Javier Alejandro Garavaglia

**Year of composition:** 2014/15

**Duration:** ca. 15 minutes

### **Program Notes:**

The piece is an outstanding example of innovation in the areas of performance technologies, composition of electroacoustic music and full automation of live electronics. The composition is unique not only because it is the first to feature the combination of these two instruments and electronics, but also due to the electronics' particular complexity of accumulation and evaporation in real-time of spectra produced live by both instruments.

The electronics of the composition consist of several spectral analysis DSP-based processes, which transform in real time the sound coming from the two live instruments. Together with Phase Vocoders, transposing the pitches of both instruments, the main DSP process is the SPECFILT, a MAX patcher by Dr Ron Parks (Winthrop University, USA), which was strongly modified and fully adapted for this piece by myself. The SPECFILT analyses the incoming spectra from both instruments and is able to capture and (by re-synthesis) accumulate those bandwidths (bins) analysed via FFT, which can thereafter randomly evaporate one by one. The accumulation and evaporation of spectral elements from the instruments sonic materials appear three times across the composition. Other processes involve ring modulated COMB filters, envelope following/cross synthesis, and different types of delays and reverb (the latter, a special version of the Schroeder type also programmed by myself). There is also an introduction of a new type of spatialisation of my authorship: Granular Spatialisation.

In regard to its musical aspects, DUO SPECTRALIS is based on two elements: a glissando and a motive, the latter, which first appears in the Tárogáto, which also organise the entire structure of the piece.

### **Dissemination**

The piece was World premiered in June 2015 during the 5th NYCEMF 2015 (New York City Electroacoustic Music Festival), at the Playhouse concert hall of the Abrons Center, NYC, USA, with Professor Esther Lamneck (NYU) on the Tárogáto and the composer on the viola part. They repeated this performance a few months later during the 41st International Computer Music Conference 2015 (ICMC 2015) at the Lyric Theater, University of North Texas, Denton, TX, USA.

Further dissemination includes the double performance of the piece by Agata Zieba (Viola) & Nikola Lutz (Tárogató) at the Galerie Henn in Stuttgart, Germany in September 2017, which featured the German premiere of the work.