

Remixed brain waves reveal soundtrack of the human brain

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Scientists have combined and translated two kinds of brain wave recordings into music, transforming one recording (EEG) to create the pitch and duration of a note, and the other (fMRI) to control the intensity of the music. The research, published November 14 in the open access journal *PLOS ONE* by Jing Lu and colleagues from the University of Electronic Science and Technology, China, reveals an improved method to reflect the physiological processes of the scale-free brain in music.

Previous research published in [PLOS ONE](#) by the same group has described how EEG amplitudes and waveforms may be converted to music. In the past, researchers at the Department of Homeland Security's Science and Technology Directorate have also explored the possibility of a form of neuro-training called 'Brain Music', which uses music created from an individual's [brain waves](#) to help the individual move from an anxious state to a relaxed state.

This new study uses simultaneous EEG and fMRI recordings to better represent the activity of the brain in musical notes. According to the researchers, this brain music "embodies the workings of the brain as art, providing a platform for scientists and artists to work together to better understand the links between music and the [human brain](#)."

The authors also suggest that combining EEG and fMRI data may produce music that better reflects the functional activity of the brain, potentially leading to improvements useful for [clinical diagnosis](#) or

biofeedback therapy in the future.

More information: Lu J, Wu D, Yang H, Luo C, Li C, et al. (2012) Scale-Free Brain-Wave Music from Simultaneously EEG and fMRI Recordings. PLoS ONE 7(11): e49773.
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