

Concert 4 - July 6th, 19h30

saccades

Ted Moore (Composer)

Jorge Sousa, saxophone (University of Aveiro, INET-md)

A “saccade” is a rapid movement of the eyeball between two fixed focal points. During this brief moment, the brain hides this blurry motion from our perception. Once a saccade motion has begun, the destination cannot change, meaning that if the target of focus disappears the viewer won’t know until the saccade completes. If the field of vision is changing too quickly, the saccades may never be able to arrive at and focus on a target, instead, the objects in view are only perceived through peripheral vision.

This phenomenon is imitated by the sound and video presented in the piece. It also serves as a metaphor for the density of information and high entropy experiences we’re constantly trying to cope with. A scroll on social media, smartphone alerts, big data, technological advancements and predictions, the abundance of choices in the grocery aisle.

The processes used to create saccades embody this density of information—and the constant struggle to track it all. Large datasets of audio analyses derived from the tape part are sent to neural networks and dimensionality reduction algorithms to find patterns and then visualize and sonify what is found. A plethora of variations on visual themes are created by the combinatorics of stochastically triggered visual synthesis modules and processing effects. Computer vision analysis adds layers to our visual and aural perception—tightly binding together the visual and auditory elements. In the final movement, source video of an eyeball is morphed via a convolutional neural network creating eyeballs that feel both simple and obvious, but also slightly make my stomach squirm.

IMMERSIVE
S O U N D A N D M U S I C C O M P U T I N G

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