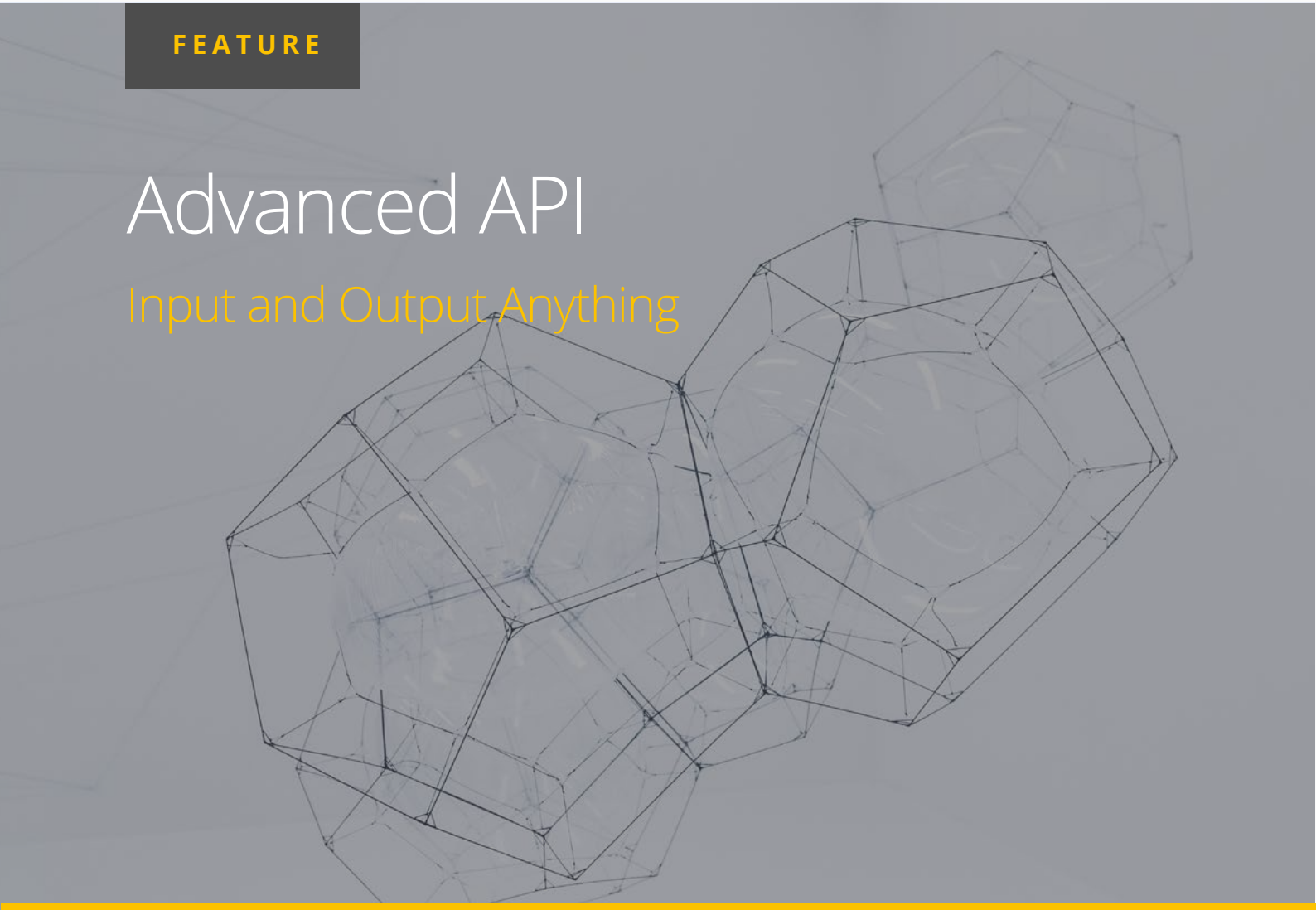
IMOTIONS

FEATURE

Advanced API

Input and Output Anything



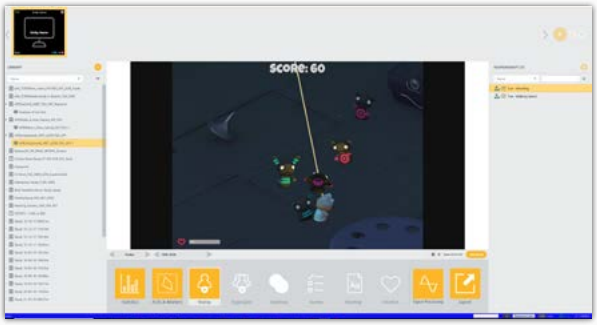
Advanced API Module

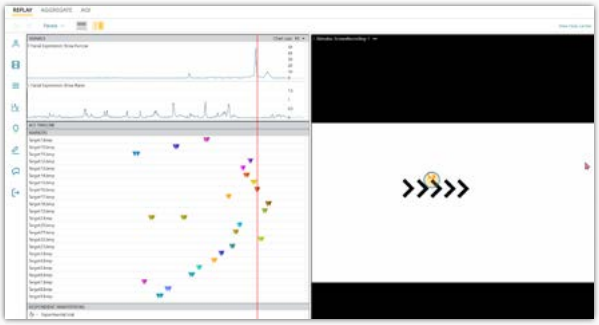
Advanced API

Increased research possibilities

The Advanced API module allows you to connect almost any device into iMotions (with or without the use of the Lab Streaming Layer), input and output the data, set triggers and more.

- Connect almost anything from biosensors, to simulators to in-car tracking via UDP/TCP architecture
- Use the Lab Streaming Layer (LSL) to accessibly connect new devices and hardware
- Use API as remote-control and create input / output loops, triggers, events, and more





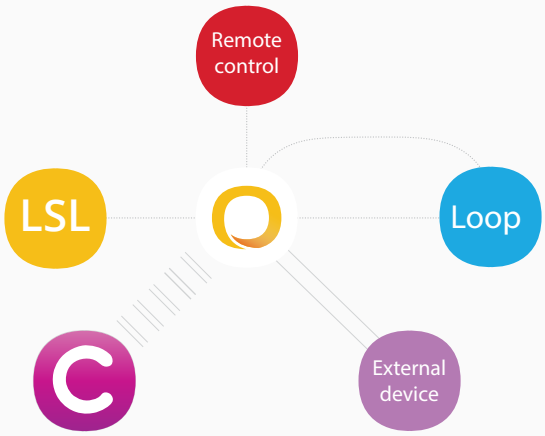
Watch the video below to see how Associate Professor Alessandro Canossa from Northeastern University uses the iMotions API in his research.

Advanced API Module Features

Adapt and control

Increased connections

Integrate additional biosensors by forwarding their data into iMotions. Almost any device or data can be synchronized with other biosensors and viewed live in iMotions using the API.



Beyond biosensor data

Bring more than just biosensor data into iMotions. Experiments that use simulators, vehicles, games, and other devices generate a variety of data that can be important for understanding human behavior. Bring all of this into iMotions to better understand how participants behave, in synchrony with biosensor data.

Forward data for triggers

Forward data out of iMotions to other devices, and use the biosensor data to trigger events. Use data such as x, y co-ordinates from eye tracking, or EDA peak detection to signal to an external device to change behavior.

Lab Streaming Layer

Connect a range of devices through the open-source Lab Streaming Layer (LSL) protocol. The readily available code makes the process of integrating new biosensors smoother and simpler.

Remote control

Control iMotions through external software. Launch session events from external sources directly to iMotions.

LSL Device Integration List

A range of new sensors to connect

LSL allows a multitude of devices to be connected and the data to be streamed into iMotions. Several devices are actively tested for their integration with iMotions and are shown in the list below - new devices can also be tested upon request. The full list of 80+ devices can be found through this link.

Actively tested devices
BioSemi Active II Mk1 and Mk2
Brain products Liveamp 16 and 64
Emotiv EPOC-X
Emotiv EPOC FLEX
Gazepoint Biometric GSR
G-Tec Unicorn
NeuroAMP x23 and x39 BEEMEDIC
NVX EEG devices
OpenBCI Cython
Wearable sensing DSI 7
Zeto EEG WR19

Selected Publications

Research made possible with iMotions

JAKE® Multimodal Data Capture System: Insights from an Observational Study of Autism Spectrum Disorder

Authors: Ness, S. L., Manyakov, N. V., Bangerter, A. et al.
Institutes: Janssen Research and Development, Duke University School of Medicine, Northeastern University, University of California, University of Washington

View publication

Emergency, Automation Off: Unstructured Transition Timing for Distracted Drivers of Automated Vehicles

Authors: Mok, B., Johns, M., Lee, K. J., Miller, D., Sirkin, D., Ive, P., Ju, W.

University: Stanford University

View publication

Adding immersive virtual reality to a science lab simulation causes more presence but less learning

Authors: Makransky, G., Terkildsen, T. S., Mayer, R. E.

University: University of Copenhagen, University of California Santa Barbara

View publication

Self-control: Knowledge or perishable resource?

Authors: Palma, M. A., Segovia, M. S., Kassas, B., Ribera, L. A., Hall, C. R.

University: Texas A&M University

View publication

Toward Affect-Sensitive Virtual Human Tutors: The Influence of Facial Expressions on Learning and Emotion

Authors: Mudrick, N. V., Taub, M., Azevedo, R., Rowe, J., Lester, J.

University: North Carolina State University

View publication

Mitigating passive fatigue during monotonous drives with thermal stimuli: Insights into the effect of different stimulation durations

Authors: Schmidt, E., Bullinger, A. C.

Company / University: BMW, Technical University Chemnitz

View publication

Deep Multimodal Fusion for Persuasiveness Prediction

Authors: Nojavanasghari, B., Gopinath, D., Koushik, J., Baltrušaitis, T., Morency, L-P.

Universities: University of Central Florida, Carnegie Mellon University

View publication

Learning Pain from Action Unit Combinations: A Weakly Supervised Approach via Multiple Instance Learning

Authors: Chen, Z., Ansari, R., Wilkie, D. J.

Universities: University of Illinois at Chicago, University of Florida

View publication

Want to know more?

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