

## Biometrics and User Experience Lab at USC – ACCESS INSTRUCTIONS

### ELIGIBILITY REQUIREMENTS

Must be a **SCRA Member Company** in good standing with access to the **SCRA Portal**.

### DESCRIPTION OF BENEFITS/OPTIONS

The company who is interested in using the **Biometrics and User Experience Lab at USC** will have access to a wide range of cutting-edge biometrics device and receive project consultation and assistance to ensure the company will gain valuable insights from reliable and meaningful biometrics data and human responses.

The Lab device include:

#### ***Screen-based Eye Tracking***

Uses near-infrared technology and an HD camera to track gaze direction and quantifies the visual attention on images, videos, websites, games, software interfaces and mobile phones.

#### ***Eye Tracking Glasses***

Allows researchers to understand how respondents view and interact in the real, dynamic world beyond the restriction in the lab settings.

#### ***VR Eye tracking***

Virtual reality affords the possibility to test behavior in any environment, creating the opportunity to capture responses in settings that would be too expensive or even impossible to recreate in the real world. The newly integrated Eye Tracking - VR module enables users to connect, record, and live visualize eye tracking data in VR, AR or 360 video simulations. Researchers can explore attentional processes in any virtual environment, opening up a huge range of new research possibilities.

#### ***Facial Expression***

Measures human emotions through computer-based facial coding, including seven core emotions (happy, sad, etc.) and 21 facial action units (brow furrow, jaw drop, etc.).

#### ***Galvanic Skin Response (GSR)***

Measures the electrical activity conducted through sweat glands in the skin, which are triggered by emotional stimulation.

#### ***Electromyography (EMG)***

Records the movement of our muscles through bursts of electrical activity generated by muscle contractions. EMG allows for a better understanding not only of muscle movements and activity, but also to investigate their association with certain emotions and behavioral outcomes, including through sensitive measurements of facial muscles with facial electromyography (fEMG).

#### ***Electrocardiography (ECG)***

Collects electrical signals generated by the heart. This allows us to understand the level of physiological arousal that someone is experiencing, but it can also be used to understand psychological states.

#### ***Electroencephalography (EEG)***

Measures electrical activity on the scalp associated with perception, cognition and emotional processes.

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Email: Wu, Linwan [LINWANWU@mailbox.sc.edu](mailto:LINWANWU@mailbox.sc.edu); Wen, Taylor [JWEN2@mailbox.sc.edu](mailto:JWEN2@mailbox.sc.edu);

CC: [Austin.Saggus@scra.org](mailto:Austin.Saggus@scra.org)

*Subject: Biometrics and User Experience Lab for SCRA Member Company*

*Body:*

*Hello Linwan,*

*I am [name] with [name of company] and I am a SCRA Member Company requesting [services] through the Biometrics and User Experience Lab at USC as part of the SCRA Member Benefit Program.*

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Process Complete!

*Next Steps to expect:*

USC will schedule a meeting to discuss details about how they may want to use the lab resources.