# The equipment we have and how to book it

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### **Mobile Eye tracker**

- SMI RED250 Mobile
- Portable, but used in Applied Cognition lab if possible
- Laptop sized, screen based, capable of measuring:
  - eye movements
  - fixation duration
  - pupilometry
  - saccades (fastest movement of human body ~20ms)
- Present images, videos, websites or mount remotely
- No need for head rests, or for the participant to remain completely still!
- Easy, robust calibration with glasses and mascara
- Very easily programmed experiments





### **Eye tracking glasses**

- Totally mobile solution glasses and data recorder
- Records:
  - scene viewed
  - where the subject is looking in the scene
  - audio
- Can be remote monitored in real time
- Easy analysis





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### **Psychophysiology monitoring**

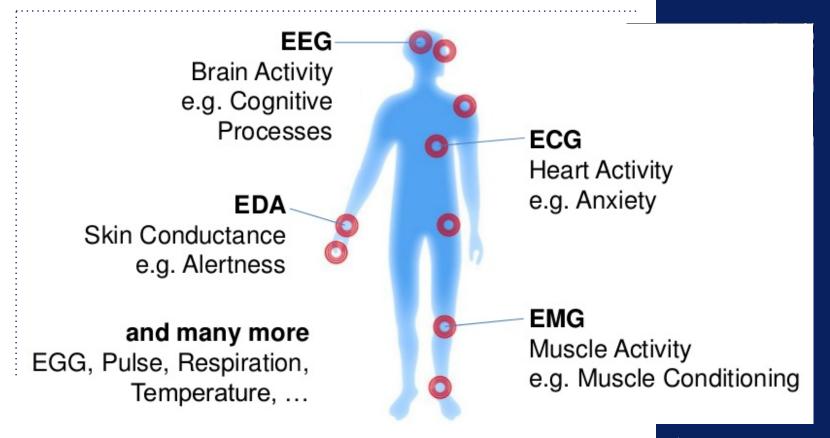
- BIOPAC MP160 Research quality measurement of emotion, arousal, stress, and startle
- Static measurements:
  - blood pressure
  - response monitoring
- BioNomadix wearable wireless devices (~10m range):
  - Electroencephalogram (EEG brain activity)
  - Electrocardiogram (ECG heart rhythm and electrical activity)
  - Electromyograph (EMG electrical activity produced by skeletal muscles)
  - Pulse rate
  - Electrodermal activity (EDA skin conductance or Galvanic Skin Response)
- Capacity to be vastly expanded 16 channels



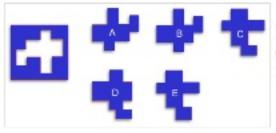




### Psychophysiology monitoring



## Integrate psychophysiology and eye tracking



Which parts in a task cause cognitive load? EEG + Eye Tracking

Eye Tracking - Cause



Physiology - Effect



What are strategies to deal with complex situations? ECG + Eye Tracking



What situations cause anxiety? EDA + Eye Tracking How do we plan and execute motor tasks? EMG + Eye Tracking



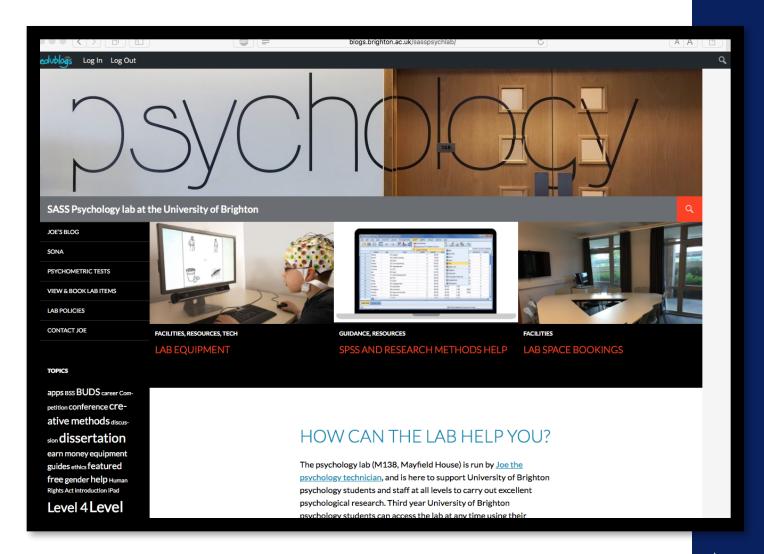
Source: Mischo, Findlay & Rose, 2016 Integrating Eye Tracking Data with Physiological Measurements



### How do you book the equipment?

- Contact me to discuss your needs and book a demonstration <u>J.a.taylor@brighton.ac.uk</u>
- However, keep in mind time restrictions
  - Priority is for psychology students and psychology staff
  - Dissertation time is not possible (November end May)
- Comprehensive information will be posted on the lab's website in due course: <u>blogs.brighton.ac.uk/</u> <u>sasspsychlab</u>

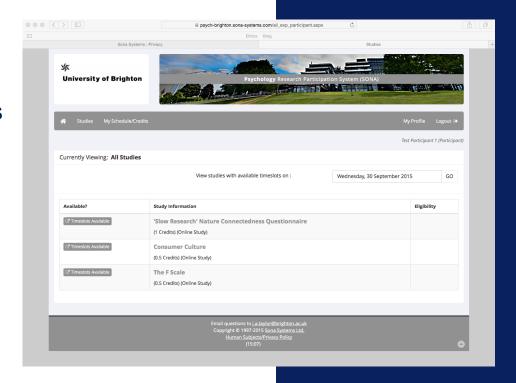
### Blogs.brighton.ac.uk/ sasspsychlab





#### What else can we offer?

- I can offer help with training on how to safely and effectively use the equipment
- I can help program experiments and with practical issues
- Potential help recruiting participants if the study has a psychological angle (SONA), and undergraduate University of Brighton psychology students are not in your exclusion criteria





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