Expeditions in Computing

Georgia Tech

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Monitoring Electrodermal Activity in RapidABC Sessions

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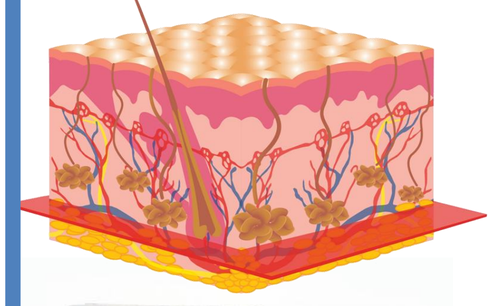
Emotional regulation and co-regulation are key components of engagement.
Measuring EDA during RapidABC sessions may provide insightful information about social interactions with children.

Electrodermal Activity (EDA)



Good Indicator
- Arousal
- Cognitive Load
- Emotions

Very Sensitive
- Temperature
- Physical Activity
- Pressure

Wearable Sensors
- Wireless
- Comfortable

Measurement Locations
- Wrists
- Ankles

(also known as Galvanic Skin Response)

Data Collection Characteristics

Sampling Rate	**32 Hz**
Sensors used per child	**2 (1 per wrist)**
Electrodes per sensor	**2**

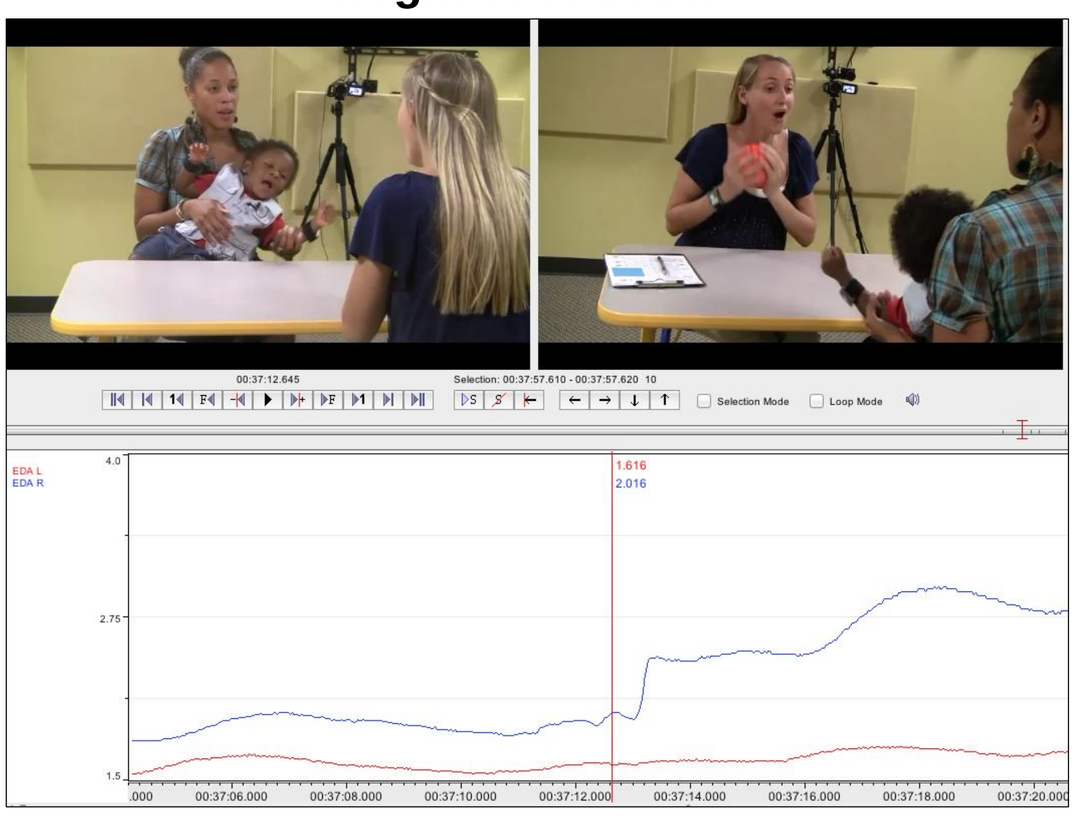
Electrode Gel to enhance conductivity

Main Challenges
- Obtaining EDA baselines
- Individual differences
- Motion and contact artifacts
- Synchronization between sensors
- Synchronization with other modalities

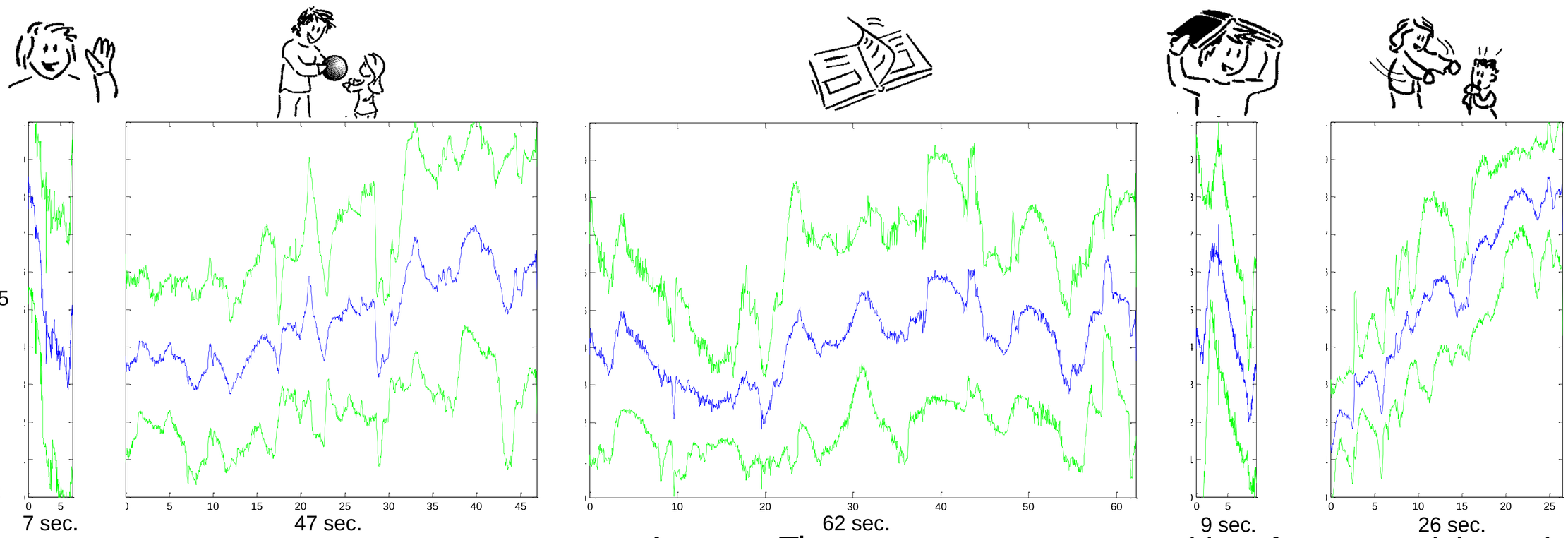
EDA Responses in RapidABC

Positive Arousal

Negative Arousal



Right and Left EDA



(data from 5 participants)