

# Embodied emotion and motivation: interoception, physiology, and brain dynamics in affective experience

Friday, September 12, 2025 9:00 AM (1h 30m)

Understanding how emotions and motivational states emerge from the dynamic interplay between brain activity, physiological signals, and interoceptive processes is a central challenge in affective neuroscience. Integrating evidence from functional neuroimaging, psychophysiology, interoception, and virtual reality interventions, this symposium illustrates how central and peripheral physiological systems jointly contribute to affective experience and its dysregulation in psychopathology.

One contribution adopts a translational perspective on reward processing, identifying individual differences in salience attribution using the Sign-Tracker/Goal-Tracker framework. Large-scale fMRI data reveal distinct patterns of neural activation during reward anticipation versus outcome, providing a mechanistic account of motivational variability.

Another study explores the therapeutic potential of immersive virtual reality for individuals with depressive symptoms. Two innovative interventions -heart rate variability biofeedback and a novel time-perception recalibration paradigm- demonstrate how targeting autonomic and cognitive processes may promote psychological wellbeing.

The affective power of interoceptive signals is further examined through research on aesthetic chills, where increased heart rate is shown to correlate with emotional complexity, particularly during ambivalent emotional states. This work highlights how transient physiological responses reflect nuanced emotional experiences.

Finally, emerging evidence from visceral psychophysiology reveals that fluctuations in gastric pH and temperature are associated with specific emotional states, such as fear and disgust. These findings support the growing view that gut-brain interactions are integral to affective processing.

Together, these studies advance our understanding of embodied emotion and motivation, offering interdisciplinary insights with implications for both affective science and clinical applications.

**If you're submitting a symposium talk, what's the symposium title?**

**If you're submitting a symposium, or a talk that is part of a symposium, is this a junior symposium?**

No

**Primary author:** LETTIERI, Giada

**Presenter:** LETTIERI, Giada

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