

# Realization of wellbeing by feedback based on psychological states evaluated by objective methods

**R&D Project Title (Registered)** Mental optimization by interoception decoding and modulation

**Project Leader :** Kimitaka Nakazawa  
Director, UTSSI, The University of Tokyo

**R&D Team :** NTTCommunication Science Laboratories, Waseda University



## Summary :

The purpose of this study is to develop a system to optimize mental condition of athletes by using new experimental approaches to decode and modulate interoception.

There have been various techniques that are empirically regarded as effective and useful to maintain athletes' mental state optimal. However, most of those techniques have little scientific evidences and a fundamental lack in the model to estimate the psychological state. In this study "interoception" is incorporated into the conceptual model of athlete's psychological state as the essential component. Interoception refers to the perception on internal bodily conditions, which has significant roles in unconscious and conscious process to regulate mental condition. We will explore new approaches to decode and read the interoception awareness, and then incorporate those methods into the system to accurately estimate and efficiently optimize the mental state of athletes. The newly developed system is expected to support to achieve the higher performances in athletes by optimizing their mental conditions. The system can be applied to various fields as well, like medical, education, social welfare, etc., to maintain one's mental condition optimal and healthy states.

*Need mental toughness?*



*Support the athlete's mental conditioning!*